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REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES

AUGUST fueloil & oilheat 1953

VOLUME 12 NUMBER 8

CONTENTS

SUBJECT	PAGE	AUTHOR
Summer Collections	61	
Another Levittown	63	
Esso Exploring Slate Pits for Storage	65	
Profits Participation boosts Deliveries	66	CHARLES BURKHARDT
Leasing Trucks for Fueloil	69	ROBERT GRAY
White-Rodgers Controls	71	J. W. SCHULZ
New Products at Boston Show	75	
Adopt new degree-day Normals	78	

COMMERCIAL - INDUSTRIAL SECTION:

Small Boiler heats oil for big Job using #6	84	JEAN L. DUPUIS
Service School conducted by Preferred	92	
York-Shipley large conversion Package	94	
Check Dealers selling C-I Burners	95	

NEWS

Chicago Home Festival set for September	16
Room cooler Shipments up 215%	23
Adopt 60° Standard for Preheated Oils	23
OHI Directors Meet in New York	78
Seneca Spring site of first Oil	80
Shipments of residential Burners up	81
List Courses of Essex County School	81
Canadian fuel survey Released	82
Five months Building up 8%	124
Mass. revises oilburner Regulations	174

DEPARTMENTS

Names in the News	6
Editorial Leaks	10
Oilheating Trends	12
Government on Fuels	18
Letters	20
Industry Groups	118
New Products	127
Manufacturers' Activities	150
Readers' Problems	158

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Among other things . . .

The most significant development of the month as told in this issue is the establishing of new normals for degree-days in 288 cities that have weather stations. Your city is changed—they're all changed, so be sure to make a note of your new monthly figures.

The book this month is heavy on fueloil features. There are six articles mainly on oil practices and management, as contrasted to only three on oilheating equipment. It is our policy to keep a closer balance, but with the hot weather and vacations, some of the heating features got snagged and are holding out for September . . . so we're oily. Next month the emphasis will shift back.

The wage incentive story on Booma-Breed is an eye opener to show how men can work if they're rewarded for effort.

MARLOWS *are* BEST

to speed deliveries at lower costs

From storage to truck — from truck to home-delivery, Marlow Self-Priming Centrifugal Pumps do the job faster and at lower cost.

Designed specifically for petroleum pumping service, Marlows can handle gasoline and home heating oils with equal ease. The exclusive Marlow Diffuser Design enables these pumps to prime and purge themselves automatically *on suction lifts*. A self-lubricating shaft seal, another Marlow feature, provides safe, drip-proof operation. Majors and independents alike know Marlow pumps for dependable, high capacity low-cost pumping performance.

For complete information see your Marlow dealer or write for new Marlow bulletin "Petroleum Product Pumps." Get all the reasons why the trend's to Marlow!

McGall Oil Company uses a Marlow Self-Primer to transfer fuel oil from 3 underground tanks through 3" loading arms to fill 1400 gallon tank trucks in 3½ minutes. Photo and installation by Shields, Harper & Co.

297

MARLOW PUMPS RIDGEWOOD, NEW JERSEY
Branch Plants: DeQueen, Arkansas
West Chicago, Illinois
Other factories in France and England. Distributors and Dealers everywhere.

Names in the News

Homer Addams, board chairman of Fitzgibbons Boiler Co. and one of the most widely known and loved individuals in the heating industry, died July 3 in Germantown Hospital, Philadelphia, aged 80 years.

Starting as construction engineer for the firm of Barber & Ross, Washington, D. C., in 1895, he held various jobs in the industry up to 1911 when he was made eastern branch manager for Kewanee Boiler Co., and then in 1920 he formed the Kewanee Boiler Co. of New York, becoming its president.

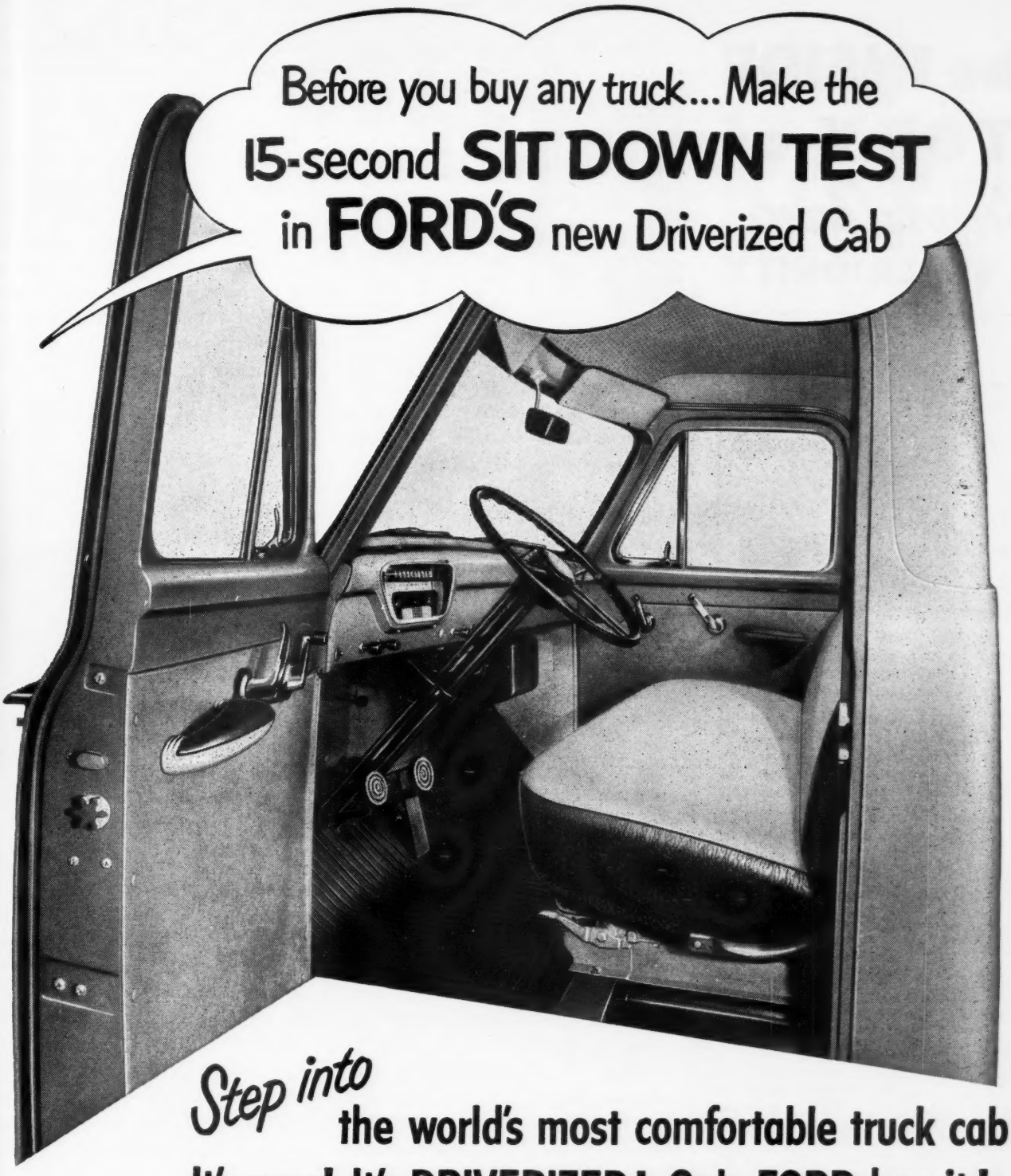
It was in 1921 that he acquired the Fitzgibbons Boiler Co. of Oswego, N. Y., and its subsequent growth to important stature is quite well known.

Active in industry affairs outside of his own companies, Addams was one of the founders in 1894 of the ASH &VE, holding several important offices and committee posts until he became its president in 1924. In 1952 he was awarded its F. Paul Anderson Gold Medal for distinguished service. A founder of the Steel Boiler Institute in 1929 he later became its president.

In 1951 he was awarded an honorary degree of Doctor of Science by Albright College, his Alma Mater.

Addams is survived by his wife, Elizabeth, and his son Paul K., who is president of Fitzgibbons Boiler Co. and also president of OHI of America.

In losing Homer Addams the heating industry loses a very able, salty individualist of pioneer characteristics . . . and a particularly pleasant gentleman.



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It's new! It's DRIVERIZED! Only FORD has it!

It's a truck driver's dream come true! You'll know it too, in just the 15 seconds it takes you to . . .

swing open the new wider doors...

slide into the 3-man comfort seat with exclusive shock-snubber . . .

sweep your eyes across the one-piece windshield and back to the 4 ft. wide rear window . . .

stretch out in big cab roominess...

sigh a sigh of solid comfort. Man! What a treat for a working guy!

The completely new Ford Trucks offer many great advancements in easier driving and time-saving delivery, all at the same low price.

They offer new power for sustained speed travel—new Synchro-Silent transmissions for faster, easier shifting—new set-back front axles for sharper turning—new features throughout to help *get jobs done fast.*

Choose the one right truck for your work from over 190 completely new Ford Truck models.

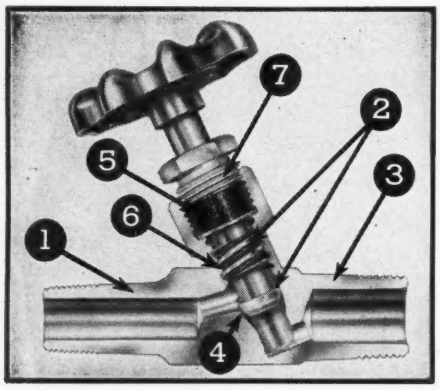
And before you buy any truck, make the *15-second* SIT DOWN TEST. It will open your eyes to comfort you never thought possible in a truck. See your Ford Dealer today!

FORD *ECONOMY* **TRUCKS**

SAVE TIME! SAVE MONEY! LAST LONGER!

fueloil & oilheat

The INSIDE STORY of *Guardian* SUPERIORITY



No. 1900 Oil Filter Valve

No. 1905 Oil Filter Valve made with ½" inlet I.P.T. male threads and ⅜" outlet I.P.T. male threads.

One valve may look much like another on the outside—but it's what's INSIDE that counts! Every Guardian valve has these features of superiority shown in the cutaway above:

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No. 1400 Globe Valve for Oil, Water or Gas

No. 1200 Individual Tank Control Valve

Guardian valves are designed for oil line service . . . built with precision . . . tested for uniformity. Look for the name "Guardian" on the valve.

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AVAILABLE NOW!

New Nylon Jaw Type coupling. Write for Catalog C-104.

Guardian
PRODUCTS CORP.
VALVE DIVISION

Dept. F-83, 1231 E. Second Street

Michigan City, Indiana

Robert W. Hundley has been appointed assistant sales manager, Wm. Steinen Mfg. Co., Newark, N. J., to work under Sales Manager Larry Knapp. Hundley was previously zone representative for Delco Appliance Div., General Motors Corp. From 1946 to 1948 he assisted in pioneering oilheating in eastern Tennessee as manager of service and installation for the Tennessee Heating and Air Conditioning Co. Steinen also has announced the appointment of *Jesse Tankel* as general manager of the Oil Burner Accessory Division and *Alfred B. Huston* to represent the firm in Vermont and all of New York north of Newburgh.

Morris Sherman, 60, one of the original incorporators of Preferred Utilities in 1921, died after a long illness in his home, June 23. Sherman, who through the years gained many friends in the oilheating industry, last served with Preferred as vice-president in charge of accessory sales. Prior to that he headed Preferred's New York office in charge of ranges and bake ovens. Surviving him are his wife, Lucille and his sons, Albert and Richard.

R. T. (Dick) Marshall has been appointed sales manager, southern division, for the Williams Div., Eureka Williams Corp., Bloomington, Ill. Marshall will maintain headquarters in Dallas, Texas, and his territory will include the area from southern California to Florida. Marshall served as district manager in Dallas and regional manager in the Dayton, Ohio, area for Chrysler Airtemp before joining Eureka Williams in 1953.

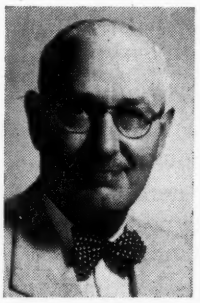
Samuel E. Bosley has been named by Owens-Corning Fiberglas Corp., Toledo 1, Ohio, as its Petroleum Industry Specialist. Bosley, who has had wide experience in applications of Fiberglas products, will be available to designers and manufacturers of equipment used in the petroleum industry, as well as to contractors and operators of production, pipeline, refinery and marketing facilities in Northern Texas, Louisiana and Oklahoma.

Philip C. Humphrey has joined the staff of the Oil Industry Information Committee, American Petroleum Institute. Humphrey came to the OIIC from The Texas Company, where he had been manager of public relations for the past 11 years. He has been identified with the Committee program since its inception in 1947, and has served three terms as a vice-chairman of the national group. Humphrey will be in direct charge of all creative work.

Jack Hall has been appointed director of sales, Acme Electric, Cuba, N. Y. Hall will be responsible for further sales development of Acme Electric's luminous tube transformers, fluorescent lamp ballasts, cold cathode lighting ballasts and transformers and other lines. Hall joined Acme in 1947.

Adam J. Rumoshosky has been appointed associate director, Division of Marketing, American Petroleum Institute, New York 20, N. Y. Simultaneously, it was announced by the API that a Marketing Division office has been re-opened in the New York API headquarters. Rumoshosky, who will be in charge of the New York office, has been with the Institute since 1937, and has been assistant director of the American Petroleum Industries Committee since 1951.

F. W. Legler, manager, New England Div., Waterman-Waterbury Co., Minneapolis, has been appointed by the board of directors, a vice-president. Legler joined Waterman - Waterbury in 1919, and was president, The Waterbury Co., a Minneapolis Waterbury distributor, from 1937 to 1948.



V&E
SCHUYLKILL HAVEN, PA.

STEEL

BUILT TO LAST
A LIFETIME
UNDER ANY
CONDITIONS

Water Tube
BOILERS
FOR STEAM OR HOT WATER

¼" PLATE—¼" wall, TUBES
Qualified for A.S.M.E. Marking

Adequate and
Continuous Supply
of Domestic Hot Water

- Fast Heating
- No Pulsation
- High Efficiency
- Easy to Clean
- Priced Right

DOWN-DRAFT
Water Tube Boilers

in **7 CAPACITIES** 480-2320 sq. ft. stg. H.W. or equiv. steam. (largest 55" high x 44" long x 22½" wide)

and a **PACKAGE** UNIT 480 sq. ft. stg. H.W. (with all controls mounted and wired)

also **3** sizes of Wallflame Boilers for Rotaries. (largest boiler diameter 25")

Here's a line of boilers that will go into any basement with ease and safety, and save half-a-day's installation cost. Designed and built by men with a lifetime's experience in automatic heating.

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TODAY for
Literature and Prices

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SCHUYLKILL HAVEN, PA.

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	SAR. 2387	GAR. 7300	WAYNE 1625	S.H. 122	WOR. 4-4421

Editorial Leaks

RECENTLY some major oil men were talking with one of our people, deploring the fact that the half cent summer discount offered to fueloil distributors and to consumers had accomplished next to nothing in stimulating sales.

The only surprising thing about this is the fact that anyone would expect that it could accomplish anything. We have stated our views on this a number of times but here goes again!

Fueloil distributors traditionally lose money in summer months because they are unable to squeeze the overhead down to match the low sales volume. As a result they have come to accept the hot months as a time to lie low, don't get excited, don't waste anything. To jar them loose from that attitude will take more imagination than has been offered up to now.

More than three-fourths of all oil-fired central heating jobs are served with automatic deliveries. The distributor will make a delivery when the tank will handle a good sized drop and not before. He is not going to chase around making small dumps which cost twice as much a gallon to handle just to save a customer a half cent when he personally has no benefit.

For years we have believed and stated that the most effective way to move fueloil in the summer is to give the marketer an incentive, which means cash. If the tank car or barge price were dropped a half cent while consumer prices stayed the same, in effect making summer margins a half cent higher than winter margins, we'd see some action, and plenty.

Secondary storage stays less than half filled most of the time. The extra margin would justify keeping it full. Consumer storage could and would be pushed up a little if the distributor had a bankable incentive.

There will always be pressure for more margin. What better way to ease some of this pressure than to say, "O.K., you can make some extra money if you'll play our game for dog days."

SOME INDIVIDUALS from the oil industry in New York, members of the Petroleum Educational Foundation, gave a luncheon for the 44 graduates from the Oilheating course at Samuel Gompers Vocational High School. One of the high spots was when the boys sang their class song.

To the tune of "Glow Worm" it goes:

Burn little burner, brightly, brightly
We hooked the fittings tightly, tightly
All is done with much precision
No sloppy work is our decision
We've put our hearts into our learning
For it's a course that's quite discerning
So we say with much regret
We're sorry we are through

Tho education's never finished
We feel our helplessness diminished
For even if there's lots to go yet
And there's much we have to know yet
We've been taught our occupation
One that's fine in reputation
And we say with much regret
We're sorry we are through

Oilheating has many desirable qualities and nobody can laugh it off, but this is the first time we've thought of it as an inspiration to poetry. Also it was an extra fine looking bunch of boys.

THE SOUTH CAROLINA OIL Jobbers Assn. held its spring convention offshore, on a cruise to the tropics. Nothing too violent transpired as would be expected in such a setting, but they did pass one resolution that begins to make sense. They whereas-ed and resolved that the major oil companies were hereby urged to earmark a portion of their advertising budgets to combat the advertising of competitive fuels and to promote the sale of oilheating.

This is a perennial subject, but it's an ideal time to revive it. The last big money promotion by majors was in 1928. In the years between we have seen small sporadic efforts.

Just at the close of the war two large majors were willing to put big money into a cooperative effort if other leaders would go along. Before the others could be sold the shortage years loomed on the horizon. Now there's plenty.

If the industry wants to build and hold a firm position for distillate fuels there is one sure way . . . keep high the annual growth rate of demand.

Thanks, South Carolina, for pitching the ball again . . . it might be caught.

SOME STRANGE notions get around, like the one about gas being more efficient in burning than fueloil, "so if the rate is higher per Btu don't worry about it because the actual bills won't be." The worst part is that some of our own fueloil people have fallen for the line.

Don't let 'em kid you. There is no fuel more efficient than oil except electricity and, believe it or not, powdered coal in huge generating plants.

Gas has built its efficiency reputation partly through the antics of its central laboratory. If a gas boiler achieves 70% net efficiency on performance, and a gas furnace reaches 75%, they are both automatically and publicly rated as 80% efficient. This is done under the weird theory that all of the rest of the heat is not lost . . . it leaks into the house through the heated chimney.

Don't let anybody fool you. Your modern oil boiler made by a reputable company is just as efficient as gas any day. If their furnaces can rightly claim any advantage it's only a point or two, while their conversion burner installations are notably less efficient than oil. So all told it's a stand-off on decent new equipment, and don't back away from that position.

Bob Gray

OVER 2,800 RESPONSES

to this small ad in one issue of a home magazine

Sure we are proud! But that's not the point. Think what this means to you. See how quickly people recognize the benefits for them in VENTALARM® Signal fuel oil delivery; how eager they are to know more about it.

CAPITALIZE ON THIS INTEREST

Use VENTALARM Signal to Maintain Old Business and Build New Business

1. Equip all old customer tanks now with Model LC VENTALARM Signal. It may surprise you to find how grateful customers will be.

2. Make a VENTALARM Signal or VENTALARM GAUGE a part of every new burner installation. Tell the customer what you are doing for him. He won't forget it.

3. Use the "VENTALARM Signal Approach" to new business. It attracts. It holds attention. It makes friends. Sales often come easier this way.

©1953 Scully Signal Co.

Where will You be WHEN THE OIL MAN CALLS?

IN THE SHOWER?

SHOPPING?

OUT IN THE CAR?

It won't matter . . . if you have

VENTALARM
WHISTLING TANK FILL SIGNAL

With VENTALARM Signal installed on your fuel oil tank, your oil supply becomes as automatic as your electric and water supply.

ENJOY THE FREEDOM OF AUTOMATIC FUEL DELIVERY

Specify the convenience of VENTALARM Signal delivery. Any Burner Sales Company or Fuel Oil Dealer can provide you with this.

VENTALARM Whistling Tank Fill Signal is a simple, small device easily installed on your oil tank. But once you have it, you are free to come and go regardless of oil delivery time. And you know that every fill, night or day, will be made safely and cleanly.

OIL MAN NEED NEVER ENTER YOUR HOME—

HE JUST FILLS 'TIL THE WHISTLE STOPS

Write for free descriptive folder

Over 4,000,000 VENTALARM Signals now in operation on home, automotive, and diesel fuel tanks.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

SCULLY SIGNAL COMPANY • Cambridge 41, Mass.

UP TO 30% SAVINGS IN DELIVERY COSTS TO YOU

And don't forget, it means as much to your drivers as to the customer. Faster deliveries, no return calls, less footwork, fewer mistakes. They can really "go to town".

Write for samples of inexpensive folders that help you tell the VENTALARM Signal story in your own territory.

SCULLY SIGNAL COMPANY

76 First Street, Cambridge 41, Mass.

Canadian Licensee: Empire Brass Mfg Co., Ltd., London, Ontario

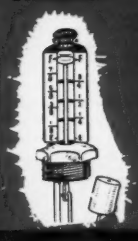
Contact your REGULAR SUPPLY HOUSE for VENTALARM® Signal in a variety of sizes.

Use "LC" Models for installation on old tanks.

Scully Products are manufactured under U.S. & Foreign patents or patents pending.

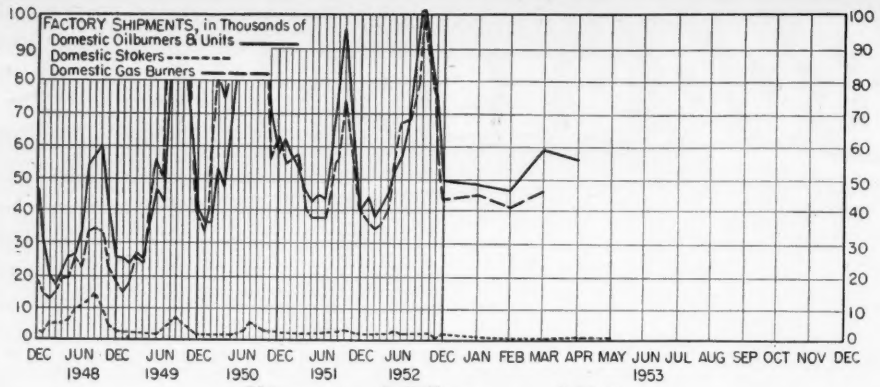
VENTALARM® SIGNAL
Whistling Tank Fill Signal

SCULLY® TANK GAUGE
Easy-to-See Gauge Simple, Sturdy, Economical



VENTALARM® TANK GAUGE
Combination Audible Signal and Visible Gauge

FASFILL® CONNECTOR
Portable connection for gun and fill pipes of all sizes.

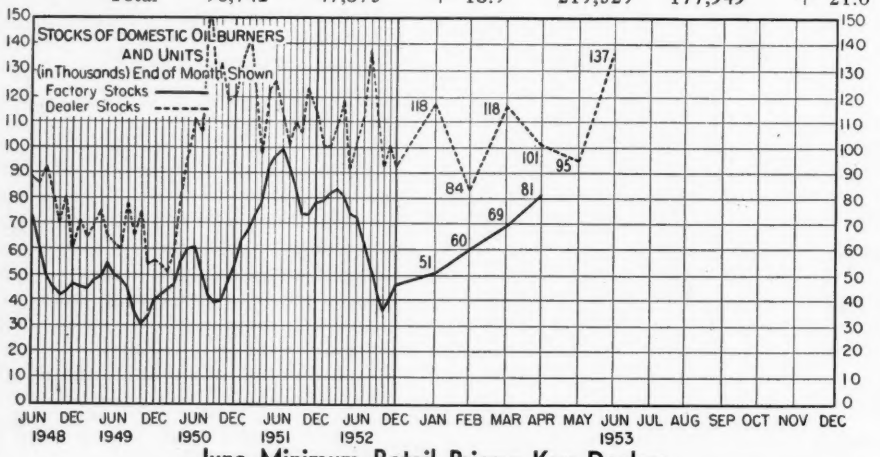

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1948 1949 1950 1951 1952 1953

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 145 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	APRIL			FOUR MONTHS		
	1953	*1952*	*Percent Change*	*1953*	*1952*	*Percent Change*
Conversion	38,092	31,048	+ 6.6	141,638	115,352	+ 22.8
Boiler Units	3,392	3,722	— 8.9	15,710	11,808	+ 33.0
Furnace Units	12,302	10,768	+ 14.2	45,434	41,172	+ 10.4
All Domestic	53,787	45,538	+ 18.1	202,773	168,332	+ 20.5
Commercial	2,955	2,335	+ 26.6	12,552	9,617	+ 30.2
Total	56,742	47,873	+ 18.5	215,325	177,949	+ 21.0

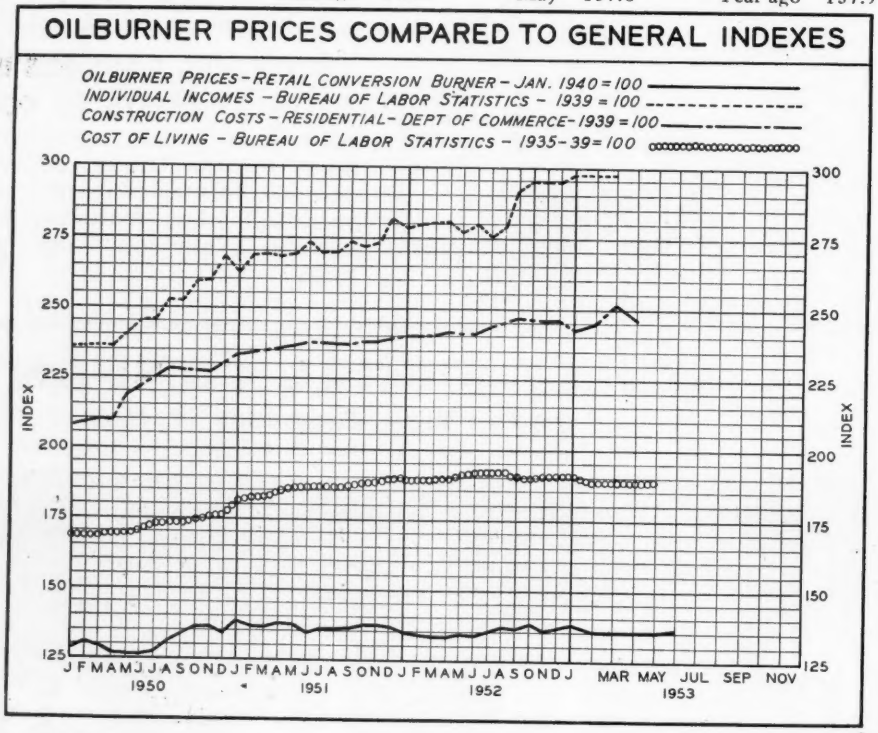


June Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
June Aver.	$317	$706	$636
May Aver.	319	707	639

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
June	140.8	Six months ago	146.3	June	135.3	Six months ago	136.6
May	142.4	Year ago	142.1	May	137.6	Year ago	137.5


OILBURNER PRICES COMPARED TO GENERAL INDEXES
OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
INDEX
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1950 1951 1952 1953

Oilheating Trends

JUNE TOOK QUITE a spurt in oilheating installations with an estimated 58,282 domestic oilburners and units compared with 46,071 in the same month a year ago. All types of installations showed up well with new homes running decidedly above previous months. The June installations were divided: New Homes, 23,685; replacements of old oilburners, 6,217; conversions from other fuels, 28,380.

Total installations for the first half of the year were 252,326 compared with 253,777 or a decline of less than 1% this year. Factory shipment figures continue to make a considerably better showing than retail installations. This naturally will work out later in the year. Some of the difference is in field stocks as shown in the next paragraph.

BURNER STOCKS: On July 1 dealers had in their warehouses approximately 136,951 domestic oilburners and units. This is a very significant rise from 95,202 the previous month, and from 102,905 the previous year. The current stocks were divided: Conversion oilburners, 80,194; boiler-burner units, 30,912; furnace-burner units, 25,845.

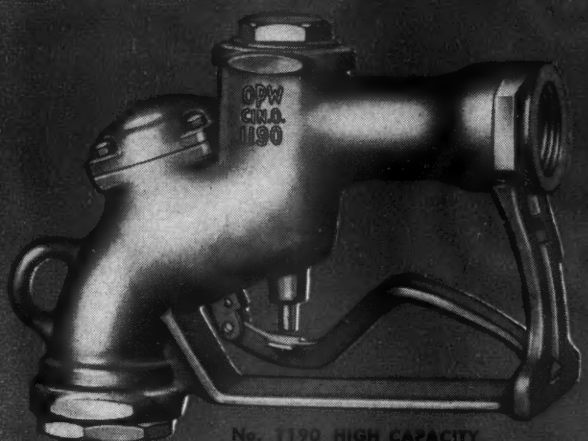
Factory stocks on April 30, latest available data, were 81,365 or approximately the same as the 82,443 the previous year. There is one significant difference, however. A year ago the stocks had been holding that level for several months while this year they had come up rather sharply from only 47,827 at the start of the year. It is quite clear that manufacturers were somewhat hesitant going into the winter and then became in later months quite confident of a good 1953.

TANK STOCKS: Dealer stocks of consumer oil tanks on July 1 were approximately 88,134 which was a little lower than 93,268 the previous month and considerably below the 108,531 a year ago. The July 1 stocks were divided by sizes as follows: 220-275 gallon, 77,281; 550-675 gallon, 5,152; 1,000 gallons or larger 5,701. There was no change in the average price paid during the month for a 275 tank. It was $35 in both June and May. There was a little difference by sections, however, with New England average at

fueling nozzles

No. 190 DUAL POPPETED CONTROLLABLE SPEED

No. 620 HI-PRESSURE TYPE



No. 1190 HIGH CAPACITY AUTOMATIC SHUT-OFF NOZZLE

No. 220 GRAVITY LO-PRESSURE TYPE

OPW has designed these liquids dispensing nozzles in a wide variety of sizes to assure you of having the right nozzle for a fast, fully-controlled, dependable operation regardless of the delivery condition.

EACH engineered for high capacity, wide flow range with minimum turbulence; easy shut-off, with no product surge . . . *ALL*, for minimum weight, perfect balance, durability and long service life.

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VALVES • FITTINGS • ASSEMBLIES
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OPW CORPORATION

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Cincinnati 25, Ohio

$31; Mid-Atlantic, $37; Midwest, $32; and Pacific Northwest, $42.

BURNER TYPE FOR GPH: The dealers were asked this month how large a burner they would recommend for No. 2 oil before advocating that the buyer consider No. 5 oil. The practices are quite similar in most sections of the country although there was a little variation. In New England, for example, the average answer was 15 gph; in the Mid-Atlantic states it was 14 gph; in the Midwest 12 gph; and in the Pacific Northwest, oddly, it was only 7 gph. National average was 13 gph. Apparently that is about the point where the higher cost of the No. 5 burner is balanced against the saving in fuel cost, at least in the opinion of the purchaser.

There is quite a sectional variation between the industry practices in selling or not selling burners for No. 5 oil. Among the reporting groups three-fifths of the New England dealers sell them; less than one-third of the Mid-Atlantic group handles them; two-thirds of the Midwest marketers sell these burners; as do approximately one-third of the reporting companies from the Pacific Coast.

The fueloil men were then asked if they sell No. 5 fueloil and only about one in seven of the reporting marketers does this.

To put a yardstick on the fuel cost savings we find that the average retail price for No. 5 oil on July 1 in the typical markets heard from was 9.1¢ and in the same markets the average for No. 2 was 13.5¢.

PREMIUMS: In a few sections of the country the fueloil marketers have been giving S & H trading stamps to stimulate sales. We find, however, the practice is not at all widespread, even through it is annoying to competition in specific areas. For example in one Oregon city half of the fueloil men use it, and there are a few spots in New England where 10% of the companies give out these stamps.

Among the reporting companies themselves, nationwide, a little under 3% use the S & H or similar premiums for purchases. They are used by one or more companies in 11% of the fueloil markets heard from.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
June		6 MONTHS			June		6 MONTHS	
1953	1952	1953	1952		1953	1952	1953	1952
22	40	127	200	Albany, N. Y.	..	..	..	..
109	100	563	800	Baltimore, Md.	418	220	2312	1981
..	..	..	..	Binghamton, N. Y.	24	11	79	56
..	..	..	..	Bloomfield, N. J.	17	7	168	32
..	..	..	..	Boston, Mass.	37	29	191	201
123	50	559	339	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	37	58	274	323
16	38	95	314	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	79	71	1223	376
..	485	..	3838	Detroit, Mich.	318	355	1640	2173
61	48	192	209	Elizabeth, N. J.	4	4	23	32
16	17	153	181	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	..	40	..	174
..	..	..	..	Hackensack, N. J.	4	29	35	107
..	67	..	556	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
..	46	..	201	Irvington, N. J.	4	3	18	18
..	..	..	..	Lynn, Mass.	21	23	94	108
..	27	..	180	Meriden, Conn.	..	..	..	..
683	449	2966	1838	Milwaukee, Wisc.	322	265	1348	1408
..	47	..	534	Minneapolis, Minn.	..	134	..	539
30	25	102	123	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	10	2	49	37
40	31	154	142	Mt. Vernon, N. Y.	..	..	..	..
205	220	819	868	Newark, N. J.	..	..	..	..
39	59	335	626	New Bedford, Mass.	..	..	..	..
44	39	189	329	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
..	20	..	153	New Rochelle, N. Y.	34	19	227	134
..	7592	..	46298	New York City (total)	..	..	..	..
6362	7020	42081	43072	Brooklyn-Queens	..	..	..	..
..	572	..	3226	Manhattan, Bronx, Rchd	..	..	..	..
54	104	397	419	Norfolk, Va.	61	67	381	804
..	..	..	..	Oakland, Calif.	..	..	..	..
..	70	..	282	Omaha, Nebr.	..	87	..	496
19	22	84	93	Orange, N. J.	0	1	13	9
22	32	103	129	Passaic, N. J.	..	..	..	..
54	106	257	344	Paterson, N. J.	19	17	82	104
..	681	..	3542	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	20	11	84	93
57	36	244	185	Portland, Me.	16	13	81	62
323	415	1636	2092	Portland, Oreg.	170	106	1100	710
16	20	106	79	Poughkeepsie, N. Y.	..	..	..	..
..	116	..	608	Providence, R. I.	17	18	106	98
..	..	..	..	Reading, Pa.	9	4	36	37
1	28	152	217	Richmond, Va.	42	34	290	313
36	29	192	235	Roanoke, Va.	..	..	..	..
292	368	1234	1389	Rochester, N. Y.	..	..	..	..
16	17	93	78	Rockville Center, N. Y.	9	3	63	33
24	24	153	147	Salem, Mass.	4	7	40	27
98	128	539	717	St. Louis, Mo.	26	45	174	270
10	17	125	190	St. Paul, Minn.	103	92	595	597
14	26	116	210	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	146	172	905	1000
..	..	..	..	Springfield, Mass.	119	44	578	413
..	39	..	325	Stamford, Conn.	..	..	..	..
..	6	..	40	Syracuse, N. Y.	..	60	..	261
..	..	..	..	Trenton, N. J.	6	6	121	98
..	..	..	..	Utica, N. Y.	11	20	55	78
78	132	325	569	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	27	107	161	243
34	25	121	130	White Plains, N. Y.	47	13	118	71
52	68	340	319	Wilmington, Del.	6	61	65	135
111	169	577	778	Worcester, Mass.	..	..	..	..
59	34	332	301	Yonkers, N. Y.	..	..	..	..
2441	2542	11906	12795	*Totals*	2164	1913	12507	11985
—4.0		—7.0		*Percent Change*	+13.1		+4.3	

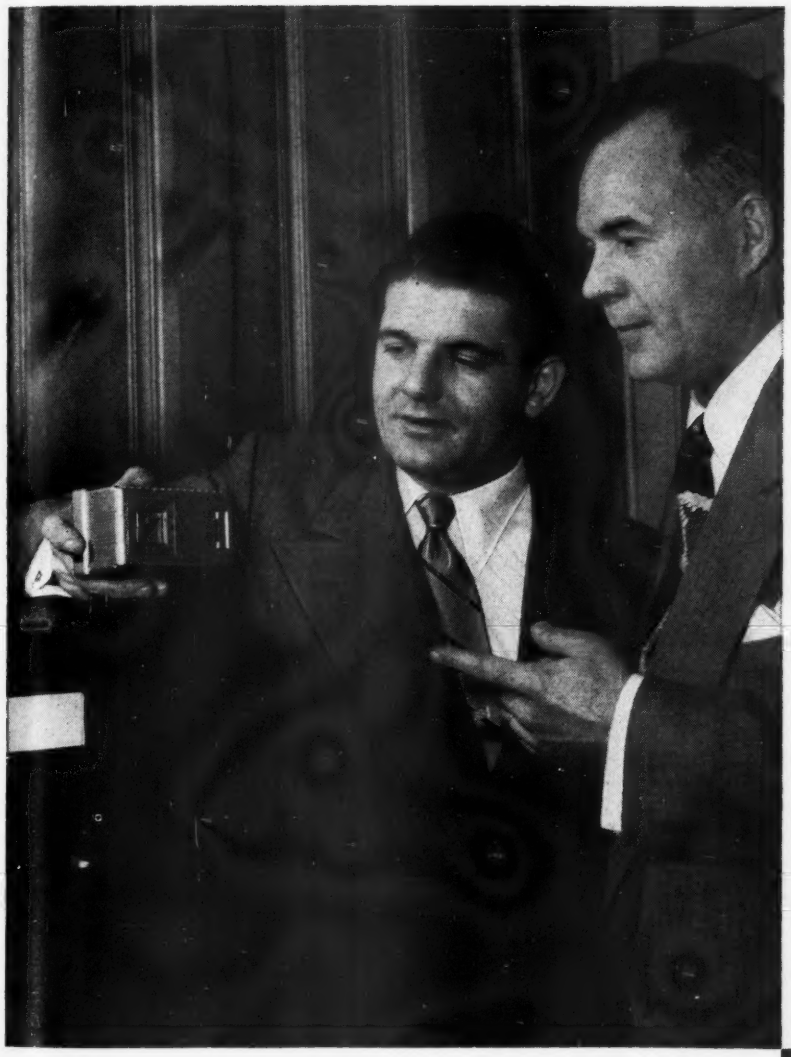
*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

The general impression is that these stamps are equivalent to about a 2% cash discount, although one marketer reports that in his city they represent .44¢ per gallon. Obviously this practice has not become so widespread as to be of concern industry-wide but it is of considerable importance in the few places where it has taken root.

SUMMER COLLECTIONS: About 13% of all fueloil customers go into the fall heating season owing a balance from the previous spring. This is understandable, because there would be

"Tailor-made for the successful heating job

—that's the Honeywell Chronotherm!" says dealer Peter Fioretti



Peter Fioretti, left, owner of Puritan Oil Co., Corona, N. Y., talking to Honeywell sales engineer Frank Ammon

"This control is *tailored* for a good installation . . . any way you look at it.

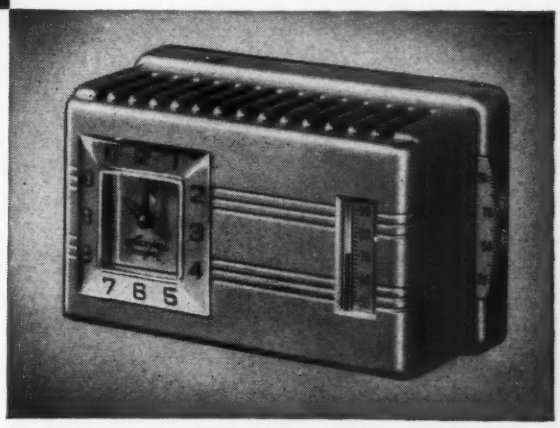
"For example, take it from the customers' point of view. With the Honeywell Chronotherm they get more comfort and the convenience of *completely* automatic control of their heating plant.

"Or, turn it around and look at it from the dealers' point of view. We make more money by pushing the Chronotherm instead of some manually-operated control. Today, we do about 1,000 installations a year. And off-hand, I'd estimate that over 300 of them wind up with a Honeywell Chronotherm. You can see how that extra profit on each Chronotherm adds up.

"It's a favorite with our service men, too. They've come to know the Chronotherm and all the other Honeywell controls because we've standardized on them, and having only one make of control to deal with has greatly simplified their work."

Sell the famous Honeywell Chronotherm!

Always offer it as an alternate on every bid you make! Latest surveys show that 3 out of every 4 families with thermostats lower temperature settings every night, and raise them every morning, *by hand*. This represents a big potential market for dealers who sell the Chronotherm—because the Chronotherm automatically raises temperature in the morning, automatically lowers it at night! For full facts, call your local Honeywell office. Or write Honeywell, Dept. FH-8-66, Minneapolis 8, Minn.



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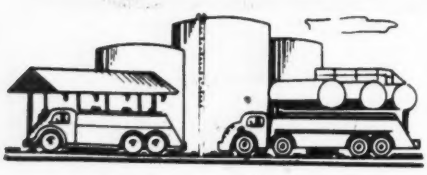


that share of the population that might feel that it only had to pay bills promptly to get more credit, which it does not need in the summer.

There is some geographic variation in this with the Midwest showing the lowest summer hangover at 10.5% and the Mid-Atlantic showing the highest at 15.2%. Of course these figures only relate to the number of delinquent customers and not to the amounts they owe. The amount of delinquent collections held over from spring to fall represents about 3.7% of the total billing of the previous heating season. In other words a typical fueloil marketer with annual billing of a quarter million dollars would carry through the summer about $9,000 in delinquent spring collections.

FUELOIL STOCKS: Stocks of distillate fuels on July 11 at refineries, terminals and in transit East of the Rockies was 76,936,000 bbls., compared with 62,531,000 bbls. on the corresponding date last year. This shows a rise of about 23%. However, there is one spot in the picture that should be flagged. The Midwest had approximately 25,000,000 bbls. on the same date each year.

The Midwest is the fastest growing segment of the oilheating industry as we have mentioned in every year since the end of the war. At the same time it is the most restricted section of the country for refinery capacity in relation to demand for all products.

To go beyond traditional supply sources the Midwest must pay through the nose in transportation costs. The distillate demand this coming season will be at least 12% above last season in that area, assuming only a normal winter. The Midwest is heading into either supply trouble or price trouble, which is the same thing at a time like this when there is a surplus of product nationally and world-wide.

Last season the Midwest consumed 4.6 million bbls. of distillate fuels less than it would have done if the weather had been normal. Counting the new burners that will be in use this coming winter and the adjustments to normal weather that segment of the country will require this coming season at least 13-14,000,000 more bbl. Then when we recognize that demands for diesel and other non-heating distillates will be up around 4,000,000 bbls. in the period from July 1 this year to June 30 next year we see that the total rise in distillate demand will be about 18,000,000 bbls. for the Midwest in that 12 month period. Refiners will have to look sharp to produce this if excessive transportation costs are to be avoided. Midwest marketers would be well advised to keep their eyes closely on this situation, and be well filled before the heating season starts.

Secondary stocks of distillate fuels on May 31, the latest available data, were 12,997,000 bbls., compared with 12,518,000 bbls. on the same date last year. In the various districts of the country the comparisons between the two years were quite similar showing approximately the same stocks each time.

DEALER COMMENTS: The dealer comments this month were all on the subject of summer collections, and they are handled in a separate article in the magazine.

❖

Chicago Home Festival to be held in September

THE 1953 CHICAGOLAND Home and Home Furnishings Festival is scheduled for September 20 through October 11 and already has developed record interest on the part of home builders in the area.

The Festival is sponsored by the Home and Home Furnishings Council with the cooperation of the *Chicago Tribune*. A number of homes, completely furnished, are to be exhibited and the *Sunday Tribune* of September 20 will contain a special supplement to signal the opening of the Festival.

❖

John O'Brien has been elected vice-president in charge of sales, Jefferson Electric Co., Bellwood, Ill. Previously, he served as director of sales and advertising since 1950.

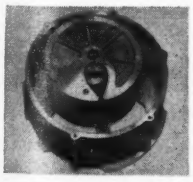
J. J. Mulvey, who recently retired as National Fueloil Manager, Atlantic Refining Co., Philadelphia, Pa., has joined Oil Advisors, Inc., New York, N. Y., as a petroleum consultant.

Every gallon saved by SUSTAINED METER ACCURACY saves the profit on several gallons sold

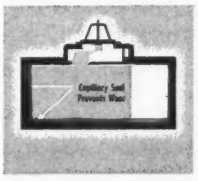
Every gallon lost by inaccurate measurement . . . every dollar spent adjusting or servicing your meters . . . loses the profits on many gallons sold. With constantly shrinking margins, you no longer can make up these losses simply by boosting volume. Best way to hold the profit line is to select the meters with the finest record for sustained accuracy *and* low maintenance. Red Seals stand head and shoulders above all other meters . . . for tank trucks and bulk plants alike. Want proof? Keep your own accuracy and maintenance records. Ask the men who have worked with Red Seal meters . . . in your own company or your neighbors.

Here's more proof of sustained accuracy . . .

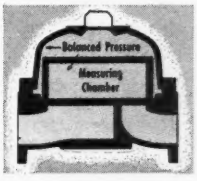
things you can see with your eyes:



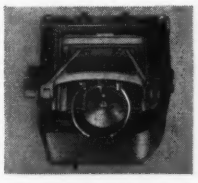
Measuring chamber has only one moving element. No complicated mechanism to get out of adjustment. Occasional dirt won't damage a Red Seal . . . chamber is easy to remove, easy to clean.



"Capillary" seal . . . a thin film of liquid . . . prevents wear between piston and chamber. Seal is rigidly controlled by precision machining . . . stays constant through long accurate life.



Double-case design eliminates distortion of measuring chamber caused by pressure or piping stresses. Prevents binding and uneven wear.



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95D

Government Influences on Fuels

by
Milburn Petty

WASHINGTON — The Korean truce, if it holds, may mean a temporary lull in oil use by the military but their purchasing programs are continuing.

This is particularly true of jet fuel, made up largely of distillate fuel oil.

With combat operations suspended, there will be a slackening in oil consumption until aircraft and ships are transferred to other areas or to the United States.

Eventually, when this logistical shift is completed, the level of oil demand is expected to be about the same as before hostilities ended. Training programs is the answer.

For example, military authorities say that, ultimately, the use of jet fuel in training may exceed that consumed in combat during the Korean War.

So, the military's bite out of "the middle of the barrel" is not expected to lessen. Jet planes will continue to burn a lot of distillate that otherwise might have been available as heating oils. But there is "at least a plenty" in sight, say industry economists.

Forecasters Raise Estimates

Thanks to unexpected increased demand for residual fuel oil and gasoline, the Bureau of Mines now believes that 1953 total demand will wind up about 5.5% above last year.

This compares with the 3.8% demand predicted at the start of this year, during the midst of an abnormally warm winter.

Another government source believes that total demand will be up 6% or more this year. By products, increases were estimated as follows: Gasoline, up 6.8%; residual, 5%; distillate, 6.7%; and kerosene, 3%.

Oil Price Increases Defended

"Sharp increases in demand" was one of the economic justifications cited by oil company witnesses during the investigation of recent advances in crude oil and product prices by the House Commerce Committee.

Higher costs was the main reason given for the 25¢ crude advance, with finding, developing and producing oil now costing 40% to 50% more than in 1947 when the last general advance occurred. It was pointed out that the government has asked the industry to develop additional reserve capacity against emergency needs—and that is expensive.

Independent refiners said the increases in product prices were no more than enough to cover their higher crude costs. They pleaded with the committee not to pressure the major companies into rescinding the product increases, lest the non-integrated refiners be "squeezed" with the crude advance holding.

Plans Probe of Proration Laws

The House Commerce Committee has lost interest in the oil price increases, perhaps because the expected outcry from consumers has not developed.

But the hearings may be continued during the congressional recess, centered upon the question of whether proration of production to market demand is "price-fixing."

Representative Heselton (R., Mass.) has said that proration—plus the Connally Law prohibiting interstate shipment of oil produced in excess of state allowables and the Interstate Oil Compact—make up a "perfectly working scheme" that the oil companies could not do themselves without violating the antitrust laws.

Chairman Wolverton (R., N. J.) suggested that state oil conservation authorities should restrict production to "maximum efficient rate" without regard to market demand.

Coal Maps New Oil Import Fight

Plans for another attempt at restricting imports of residual fuel oil are already being mapped by the National Coal Association, undeterred by the 242-to-161 defeat of the Simpson Bill.

This bill (HR-5894) would have limited imports of residual in any quarter to 5% of domestic demand for residual in the corresponding quarter of the previous year. Had it been in effect this year, residual imports would have been limited to about 87,000 B/D compared with actual imports of 459,000 B/D during the first three months.

Apparently bottled up in the Ways and Means Committee, the bill got out under a reported deal with Representative Simpson (R., Penna.) to blast loose the excess profits tax extension, so urgently desired by President Eisenhower.

"We lost because the New Deal is still in control," said the coal association in a bulletin urging its members to work on their congressmen during the summer recess, preparatory to another attempt at anti-import legislation in January.

Dissenting from the majority report, five committee members ridiculed the idea that imports were to blame for the coal industry's troubles which, they said, are "primarily technological."

Ike Comments on Import Quotas

One factor in defeat of the Simpson Bill was President Eisenhower's press conference statement that he was opposed to any oil import quotas now—particularly from the Western Hemisphere.

Instead, he suggested that Congress wait for a report from the new 11-member commission that is to investigate the impact of imports on the domestic economy. Even then, however, Ike reiterated, he did not believe he would ever favor quotas on oil imports from Canada, Venezuela and other countries in this hemisphere.

Limit on Mid-East Oil Only?

Eisenhower's statement left the inference that he was open to conviction that something should be done about imports of Middle East oil—not necessarily, however, through legislative restrictions such as the Simpson Bill.

This view is not new for Ike; he stated it previously in private conversations. It is important to fueloil marketers because, if it prevails, Venezuela —a large source of residual—would be exempted from import controls (assuming that Ike is convinced they are needed).

However, it would be difficult to devise a law that could be applied to one friendly area (the Middle East) and not to another.

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OR LAST

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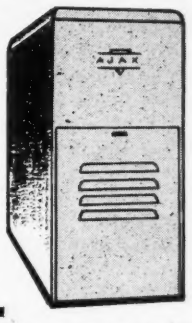

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You can see the difference in HEIL newspaper mats. You come first, you get most of the space. You can see it in HEIL dealer sales aids—you get the most complete package ever offered to help *you* do the kind of selling *you* know how to do. No question about it, it's *your* merchandising program, and probably nobody else in the heating field is as merchandising-minded as HEIL.

More than that, every last piece of HEIL heating equipment is designed for you. Before a single model was built, thousands of dealers were asked what they wanted in heating—then HEIL gave it to them. As an example, you dealers recently told us *yourselves* that you can save an average of $47.85 on each installation of a packaged HEIL unit.

The HEIL franchise, too, puts *you* first. You have more than a scrap of paper . . . you have a friendly relationship that takes the headaches out of doing business. When you sell HEIL you make more money, more easily, because you get help where you need it most—on your own doorstep. Write today for facts on the HEIL franchise. You'll be glad you did.

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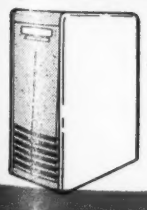
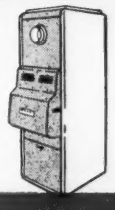
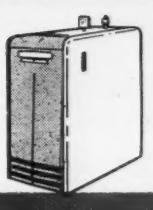


Oil-Fired and Gas-Fired Winter Air Conditioners

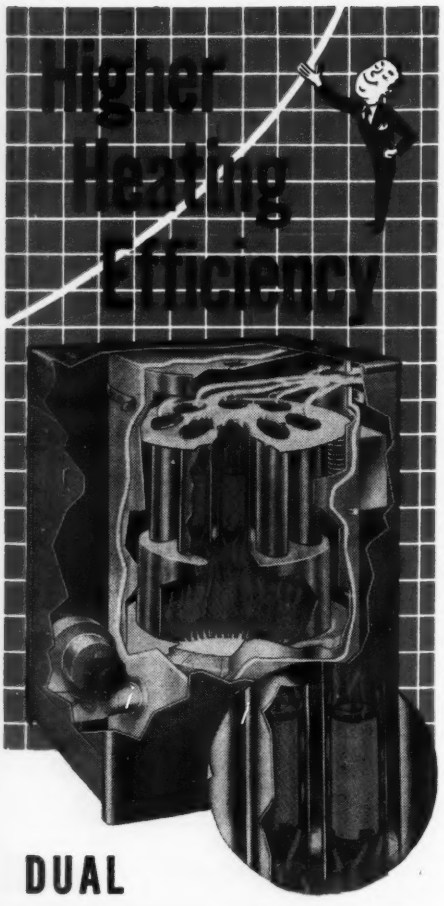


Oil-Fired and Gas-Fired Highboys

Oil and Gas Conversion Burners



Oil-Fired and Gas-Fired Boilers

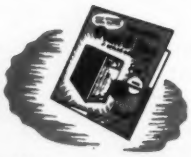


DUAL ECONOMY

STAINLESS STEEL INTENSIFIER TUBES

Installation economy for you **because the Dual 8 is easy to install and service: the cabinet is installed after all piping is completed; all controls are on the front of the boiler; the intensifier tubes are readily accessible.** ***Economy for homeowners*** **because they get faster heat with less fuel: the intensifier tubes see to that by cutting chimney heat loss and speeding heat transfer. Then add A. S. M. E. Code Construction and contagious customer satisfaction ... that's a recipe for more sales and more profit.**

Write for new folder: 1033 New Britain Ave., West Hartford, Conn.



*U. S. PAT. NO. 2,560,275

Acme DUAL 8 BOILER BURNER UNITS

ACME HEATING DIVISION

THE UNITED TOOL and DIE CO.

Letters

LIONEL L. JACOBS & SONS
Wayne, Pa.

Editor:

I know a better one than the string and block juggling act told in your July Editorial Leaks.

In upstate New York one of my dealers recently asked me to stop in and see a customer of his who wanted one of our five-year boiler guarantees in the flesh. I did so and noticed an enamel basin under the burner, half full of oil.

I said to the customer: "Why don't you have a serviceman fix that leak?" "Do you think I'm crazy?" said the customer. "If I did that the oil would be burned and wasted. As it is, I put it back in the tank once a week!"

Oh, boy. Give me strength!

LIONEL L. JACOBS

❖

MOORE OIL CO., INC.
Burlington, N. C.

Editor:

We have a small county association of local oil dealers and we are concerned because the Piedmont Natural Gas Co. has recently completed a pipeline into this area from Texas.

Frankly, we do not know what to expect in the way of competition because this is something new. We would appreciate any suggestions and ideas.

ROBERT C. MOORE

This is a perennial problem always popping up in some part of the country, but in spite of the progress being made by gas, the oilheating industry still manages to keep well ahead of it.

You will find that as natural gas comes in the newspapers will give it a lot of free publicity. This will be annoying to your crowd, but it is understandable because the project is real news. Natural gas will get most of the small new home work, particularly speculative builder developments. The reason for this is that the gas burner is quite a little simpler than an oilburner, and since it does not require a fuel tank, the total installation cost will run around $150 lower for gas.

The builder knows that the public will accept the house with gas heat, and he is not going to worry about what their future fuel bills will be. Naturally, on small homes that are well insulated the difference between fuel costs will almost always be small regardless of the rate.

Gas cannot take away your present fueloil customers if they are being well treated.

Officials of gas utilities point out that they can take the small new home business, then if an oilburner is dilapidated and has been giving a lot of service trouble and expense they can usually go to that owner and get him to throw it out and put in gas.

The extent to which oil men in Burlington lose present customers to gas will be an exact measurement of the dissatisfaction with oilheating. Gas can provide nothing that oil can't. Our fuel is just as automatic, assuming, of course, you use degree day automatic deliveries. Oil is just as healthful and everything about it is just as desirable, in fact oil has a slight edge on desirability because it is safer.

Talk this over with your oil men in the community and make a wide effort to check into every oilheating installation that each company may have to make sure that the user is well satisfied. As a rule there is a considerably higher degree of satisfaction among users that buy from oil companies that are in the oilburner and service business. Where the oil man sells only oil, he is not as a rule inclined to think so much of the consumer's happy living as he is of his own tanks and gallonage and bank loans and what have you. Naturally, there are exceptions to this rule but not many of them.

Any homeowner that has spent $300 up to $1,000 for an oilburner or oil unit would be plain idiotic to throw away that investment to put in gas unless he is quite dissatisfied as a result of poor service.

Beyond all of this you should determine the house heating rate on this new gas and see how it compares with oilheating costs. You can assume that the efficiencies of both types is the same because on modern installations it would be the same.

No. 2 oil has 140,000 Btu to the gallon. Your natural gas has probably

NEW THRUSH TANKS

Reduce Draining Time

DRAIN COMPLETELY IN A FEW MINUTES

THE VACUUM BREAKER NOW IN ALL THRUSH PRESSURE TANKS

NO EXTRA COST

THE FIRST REAL IMPROVEMENT IN TANK DESIGN IN MANY YEARS! THRUSH ENGINEERING LEADS AGAIN!

HERE'S AN ADDED convenience feature found only in Thrush Pressure Tanks! It saves your time! . . . saves labor! Reduces service bills! Pleases customers because you can get the system back in operation without delay. No need to drain the whole system. Just close the stop valve, open the drain and unscrew the Vacuum Breaker to allow air to enter the tank. A thirty gallon tank will drain in ten minutes. You get more for your money . . . build greater customer satisfaction, too . . . when you install genuine Thrush equipment. Ask your wholesaler about it or write Dept. C-8.

TO BE SURE IT'S A GENUINE THRUSH PRESSURE TANK . . . LOOK FOR THE VACUUM BREAKER BEFORE YOU BUY!

H. A. THRUSH & COMPANY

PERU, INDIANA

ANNOUNCING THE NEW . . .

HIGH DELIVERY AIROTOR Blower Wheels

REG. U. S. PAT. OFF.

Especially useful in Oil Burner applications

The new "H" Series (High Delivery) Airotor Blower Wheel enables most oil burners to qualify for an upward revision of rating — or to attain existing maximum rating far more easily — at no increase in manufacturing cost.

- **Delivers up to 15% more air with no change in dimensions.**
- **Working area of individual blades increased and blade curvature made more effective.**
- **Operates effectively against higher static pressures.**
- **For applications where motor load is critical, some testing to evaluate effect on motor load will be necessary.**
- **Available in 4¼", 4¾", 5¼" and 6⅜" diameter Airotors in all popular widths. Priced same as standard Airotors.**
- **Samples for test purposes or performance graphs available on request.**

For complete information write Torrington today . . .

The TORRINGTON MANUFACTURING COMPANY TORRINGTON, CONNECTICUT

Western Division: Van Nuys, California **In Canada: TMCo., Ltd., Oakville, Ontario**

1,000 Btu to the cubic foot. Thus it will be easy for you to calculate the difference in cost. If gas is equal to or higher than oil cost as a fuel, I would recommend that you do considerable local advertising for the next couple of years on the benefits of oilheating. This will counteract some of the gas company's free publicity.

This advertising could be either a group effort paid for on some fair basis by all of you in the county or if that can't be done, the stronger individual companies should do it and, of course, identify themselves with it. If you do this, don't make the mistake of ever mentioning gas in the advertising, simply use the space to glorify oilheating.

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CAMPBELL'S HEATING SERVICE
Bridgeton, N. J.

Editor:

Here is a newspaper clipping on "Salute to Competition" which I thought appropriate enough to reproduce in your columns.

A businessman has a plaque on a wall above his desk which reads as follows:

"My competitors do more for me than my friends do; my friends are too polite to point out my weaknesses, but my competitors go to great expense to advertise them.

"My competitors are efficient, diligent and attentive; they make me search for ways to improve my products and services.

"My competitors would take my business away from me, if they could; this keeps me alert to hold what I have.

"If I had no competitors I would be lazy, incompetent, inattentive; I need the discipline they enforce upon me.

"I salute my competitors; they have been good to me. God bless them all!"

Business competition takes many forms. Sometimes it is in price. Other times it is in the quality of service. Other times still it is in some innovation which people find interesting and attractive. Whatever the form, competition—which exists in its true state only in a free economy—is the greatest force for progress that exists.

JAMES B. CAMPBELL

Room cooler Shipments increase 215% over last Year

AN INCREASE of 215% over last year has been recorded in manufacturers' shipments of room airconditioners during the first half of 1953, according to the Air-Conditioning and Refrigeration Institute of Washington. At this rate 1953 shipments will exceed one million units, compared with 365,451 units in 1952.

"People are buying more and more of the larger sizes with the ¾ ton room airconditioner proving the most popular model," says George S. Jones, Jr., managing director of the Institute. In fact, he continues that the controlling factor in slowing down shipments later in the year will not be "lack of sales, but the production of component parts."

"It is our opinion," Jones says, "that, while the saturation point is being approached faster in offices than in homes, it is the purchase of room airconditioners by the public which is the cause of the great increase."

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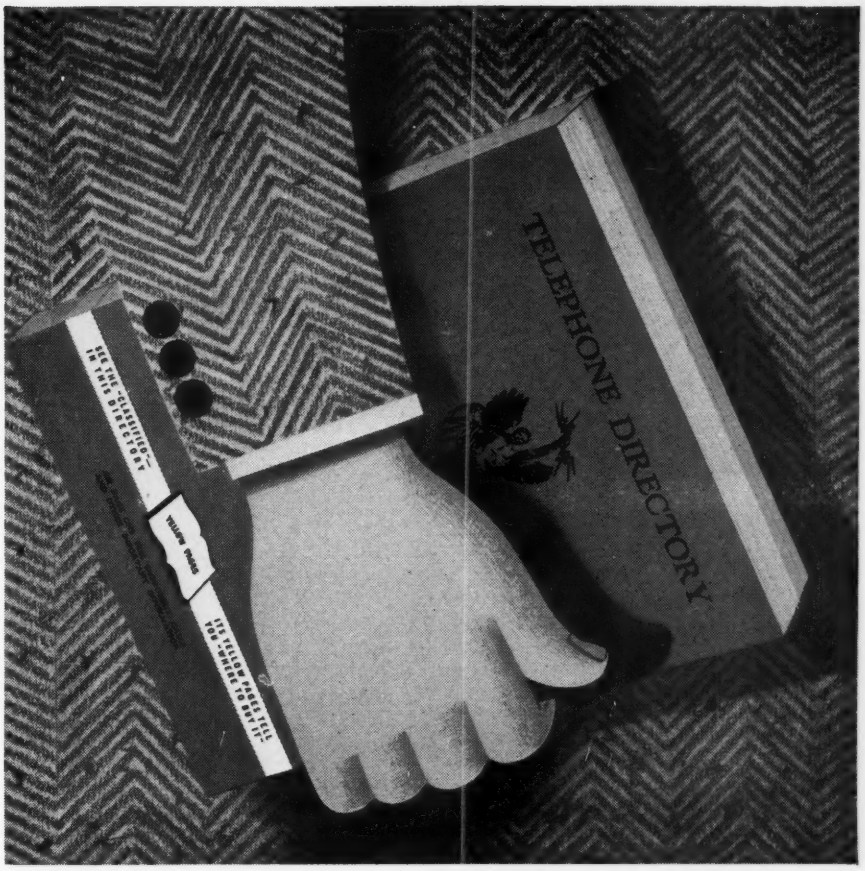
Standards Bureau Adopts 60° for Preheated Fueloils

THE NATIONAL BUREAU OF STANDARDS, Department of Commerce, Washington, at its 38th National Conference on Weights and Measures held in May, took the following action to bring some degree of uniformity to fueloil temperature adjustments: (direct quotation from its report)

Preheated Fuel Oils

Action: Shall be sold by determined net weight or by volumetric measurement based on the United States standard gallon of 231 cubic inches, its multiples and binary submultiples, the said measurement to be corrected to 60° F.

When sold on the basis of volumetric measurement, determined by the certified capacity of a vehicle tank compartment, the vehicle tank compartment and the piping shall be so designed and constructed and shall be so mounted upon the vehicle that complete delivery shall be made from any compartment through the delivery faucets.



Helping you get new customers is his business

The job of the Classified Telephone Directory representative is to show you exactly how the 'yellow pages' can be helpful in expanding your business.

He knows a lot about people's shopping and buying habits in your town. He's also familiar with sound business-building ideas and can offer many valuable suggestions for directing more customers to you.

His experience in helping others to promote their business can be profitable for you. A few minutes of your time will prove it. Call him today at the local telephone business office.

BELL SYSTEM

NiAGARA Announces

1. YEAR-ROUND AIR CONDITIONING

Provides Summer Air Conditioning . . . DOUBLES Profit Opportunities

Niagara refrigerated-air Home-Cooling Units are designed to use the blower, filter and ductwork of the forced-air furnaces beside which the units are installed. Semi-hermetically sealed compressor, cleanable tube condenser and liquid refrigerant (Freon) receiver, all serviceable on location. Operate with low voltage room control.

The cooling units are designed to match the famous Niagara Series 50 AC furnace with the exclusive Niagara cast-iron heat exchanger — installable also with your customers' present forced-air furnaces of ANY reliable make.
Cabinets of 2-ton and 3-ton capacity units are 22″x37″x47½″ high.

2. NEW CONVERTIBLE *OIL-GAS* FURNACES
. . . New Economy for Suburban Homes

These furnaces are the ideal solution to the problem of many thousands of forward-looking home owners, builders and remodelers seeking the utmost flexibility in a practical, modern, automatic home-heating system for today . . . and *for years of tomorrows!*

Easily convertible with new Niagara Gas Conversion Burner.

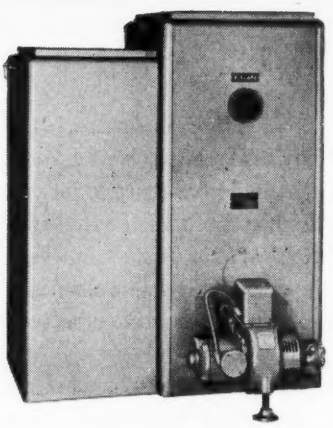
Exclusive Niagara rectangular heat exchanger permits exceptional compactness.

Available with or without burner hood which accommodates either gas or oil burner.

Also available in Down-Flow and conventional Hi-Boy models.

Sizes for large, medium and small homes.

WRITE for complete information.



Oil-fired AC unit. (Available also as gravity furnace — without blower-filter unit which is installable on either side.)

NIAGARA FURNACE DIVISION

The Forest City Foundries Co., 2500 West 27th Street, Cleveland 13, Ohio

HOME-HEATING EQUIPMENT MANUFACTURERS SINCE 1890

Summer Collections

Fueloil Dealers comment on Ways to induce Payment by slow Accounts in warm Weather

A FAVORITE EXPRESSION of baseball commentators, popularized by Frankie Frisch and used to typify the trouble a pitcher brings on himself, is "Oh, those bases on balls!" Along the same lines some fueloil dealers find themselves moaning, "Oh, those summer collections."

Judicious granting of credit and continuing prompt collections, of course, always are a concern of fueloil dealers and they are set up to watch both closely. But comes the warm weather and there is no immediate need for the homeowner to order another tankful of fueloil, some of them become shaky credit risks. During the cold weather they are faced with the possibility of having deliveries discontinued if they get too far behind in their payments, but with the threat of a cold house removed, it becomes increasingly difficult for the fueloil dealer to collect some of his outstanding receivables.

Many dealer Views

The dealers who participate in FUELOIL & OIL HEAT's monthly survey as reported in *Oilheating Trends*, last month were asked: "About what percentage of your customers usually have old balances from the spring when you come into the fall season?" These dealers reported nearly 13% of all oilheating customers were delinquent in this respect. And they represented nearly 4% of the previous heating season's total billing.

Then these dealers were asked to describe the methods they use to induce these slow accounts to pay up. An analysis shows that fueloil dealers generally employ about eight definite plans, sometimes combining three or four of them into a coordinated program.

The collection letter is the most popular means of going after the slow accounts, nearly one third of all the reporting dealers saying they use such a plan. Some of them combine the collection letters with telephone follow-ups or personal calls, others use stickers on the statements that accompany the letters. The stickers range from gentle reminders that "you're a little overdue on your payment" to the last ditch notification that "We're going to have to turn your account over to our attorney for collection unless we receive your check at once."

Retain the Account

All of the eight plans mentioned in the survey have one thing in common. First, naturally, they attempt to get the customer to pay promptly for services already rendered, but, equally important, all are moderate in tone in the obvious attempt to keep all accounts current and yet not lose a customer's good will. Here are some of the highlights of a few of the plans.

A metropolitan New York dealer sent in a series of four collection letters that have been used successfully on overdue accounts. The first letter is a simple statement that the company operates on a policy of courtesy and fairness for all its customers. Then, "If you feel that we have been courteous, fair and reasonable in the handling of your account, we would appreciate a remittance by return mail."

The second outlines some economic facts of life, acknowledging that the homeowner has his problems in meeting obligations, and by the same token, "We too have our bills that must be paid every ten days at the oil terminal where the oil we purchase is delivered to you." The third follows the same theme with the notification that "We are holding up your next delivery of oil." At the same time this letter permits the homeowner to check statements at the bottom of the letter either to send the entire balance, part of it or to set some definite date when he will make payment.

The fourth letter, which is sent after an account is four months past due flatly asks for a remittance within five days, in the absence of which the account, as a matter of company policy, will be placed in the "hands of our attorney for collection by serving you with a summons."

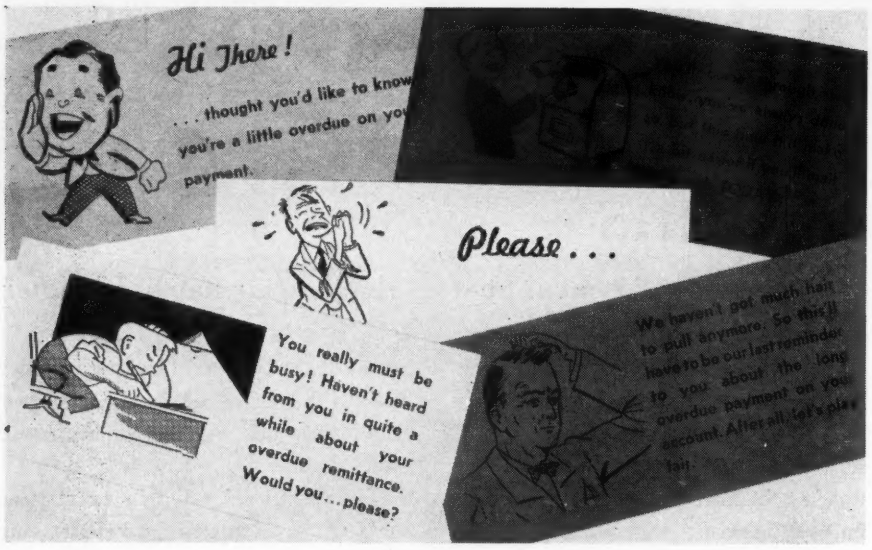
Another dealer uses a letter sent out during the spring and summer months to delinquents explaining "Our business year ends July 31 and we ask for your cooperation in paying up this amount before the start of the next heating season." If this cannot be done, the letter asks that the homeowner call the dealer so that arrangements can be made.

One other company indicated that it too uses a series of four letters before turning slow accounts over to an attorney for collection. This same company comments, "We don't want any slow accounts on our books. Would rather have fewer customers and have them pay on time."

Phones get most

Others who use letters remarked that they always were supplemented with telephone reminders and even personal calls. As one dealer put it, "We make three to five mailings of statements and then personal follow-ups. Usually these clear up all but one or two accounts by September 15." One company with more than 4,000 accounts favors the telephone call method only for accounts that involve large sums; with others they have found it effective enough to send out statements.

A New Jersey fueloil dealer who has had success in using telephone calls to touch up past due accounts has am-


Hi There!
. . . thought you'd like to know
you're a little overdue on yo
payment.
Please . . .
You really must be busy! Haven't heard from you in quite a while about your overdue remittance. Would you . . . please?
We haven't got much hair to pull anymore. So this'll have to be our last reminder to you about the long overdue payment on your account. After all, let's play fair.

plified the plan by combining it with a contest for his employees. He says: "We have tried many gadgets and gimmicks to collect slow accounts during summer. However, a telephone campaign has proved most successful tied in with a contest among office personnel. Prizes are items of nominal value, such as nylon stockings, awarded to the girl who is instrumental in bringing in the most collections among the over 90 days accounts."

Get bank Notes

Two of the dealers find that getting the customer to sign bank notes for past balances "seems to be the best way out." One of them explains, "Many of our accounts sign notes which are discounted at the bank. The customer pays his installment to us and the bank charges our account. This makes the note payments easier for the customer and leaves a better feeling toward the company."

Summer discounts also have been used to clean up old accounts, in one case a New England dealer reporting that he holds up summer fill-ups which are at discount prices until the account is current. Another notifies all customers by card that anyone who does not have "a past due balance may deduct ½¢ per gallon on all fueloil delivered from May 1 through September 30."

In sending out renewal contracts for the next heating season's deliveries, where applicable, a note is sent along reminding the customer of his unpaid balance. The dealer who uses this method also tells customers that this "must be paid before we will protect them for the coming season."

Other dealers who promote budget payments include for delinquent accounts a form letter that states the budget payments will be so much a month, "which will include your present balance." A variation of this includes the notification that a new budget plan cannot be started until the past due amount is paid.

Some other inducements include offering 30 day and cash fueloil customers one free winter service call if the account is kept current. Some dealers keep customers who have a poor credit history on a load to load basis, with no deliveries after the second load until bills are paid. Another has instituted a policy of making no deliveries in the fall until the account is paid in full for previous drops.

It is obvious after reading the dealers' comments that summer collections are of some concern to all of them. None apparently is in any serious trouble over the amounts they are unable to collect promptly after the end of a heating season, in fact one dealer happily reported he found it unnecessary to use any special plans or gimmicks. But the annoyance, rather than the problem, of expending time and money to make summer collections is experienced by a good many dealers, particularly as one dealer laments, "it seems that it is the same customers every spring who are slow in paying their last fueloil bills."

A disgruntled Long Island dealer is frank in his statement that, "If it were legal the only gimmick I'd use would be a club!", and two others resignedly declare, "We everlastingly pound and hammer these slow accounts and don't ever expect to be able to stop."

It is fortunate perhaps that the one happy note sounded by the dealers who discussed their summer collections is typical to all areas: "Most people are honest and take pride in payiing their bills. The rest are checked carefully and contacted by mail, telephone and personal calls." Thus the pattern is established that most fueloil dealers will find the majority of their customers reasonable and prompt. The remaining small minority apparently always will be slow and it is to them that the dealer must expect to direct some collection effort.

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FPC Decision threatens gas Shortage in Baltimore

A RECENT DECISION of the Federal Power Commission in Docket G-1850 allocated natural gas which was shown to be available to Atlantic Seaboard Corporation. The Oil Heat Association of Maryland, Inc., Baltimore 1, Md., reporting this decision to its members revealed that the Consolidated Gas, Electric Light and Power Co. of Baltimore was given an allocation of 85,000 mcf per day. This would correspond to its peak day requirements for the winter season of 1952-53.

The company has filed for leave to intervene in the re-opened proceedings. In a petition it sets forth that in the winter of 1953-54 it will require on a peak day an estimated amount of 95,000 mcf. Even if Consolidated were allocated this amount, it states it still would be necessary to utilize peak-shaving equipment to the extent of 36% of its peak day total load. If it is confined to 85,000 mcf on a peak day, Consolidated declares it would be required to peak-shave as much as 43% of its load.

This, it is claimed, not only would place a severe economic burden on the company and its customers, but would alter the characteristics of the gas supplied and cause considerable difficulty in customer utilization.

Another Levittown

With 4,200 new Homes completed Meenan Oil is in again

IT WAS BACK IN THE February 1950 issue that the industry read the story, "Everybody's a Customer," with its amazing description of how a fuel-oil company had 99% of the business in a town of 50,000 population where every home was oilheated.

Meenan Oil Co. was in that happy situation out at Levittown on Long Island. The story described the 3,300 gallon dual trucks from which two men served three homes simultaneously . . . and served the three homes in five minutes under the friendly pressure of a stop watch.

In the three and a half years since then that community has grown to better than 75,000 population and Meenan still has virtually all of the business. Now they are in the process of duplicating the whole performance in Bucks County, charm spot of eastern Pennsylvania. Already 4,200 homes are occupied in the new development and the goal is 16,000 by the end of 1955.

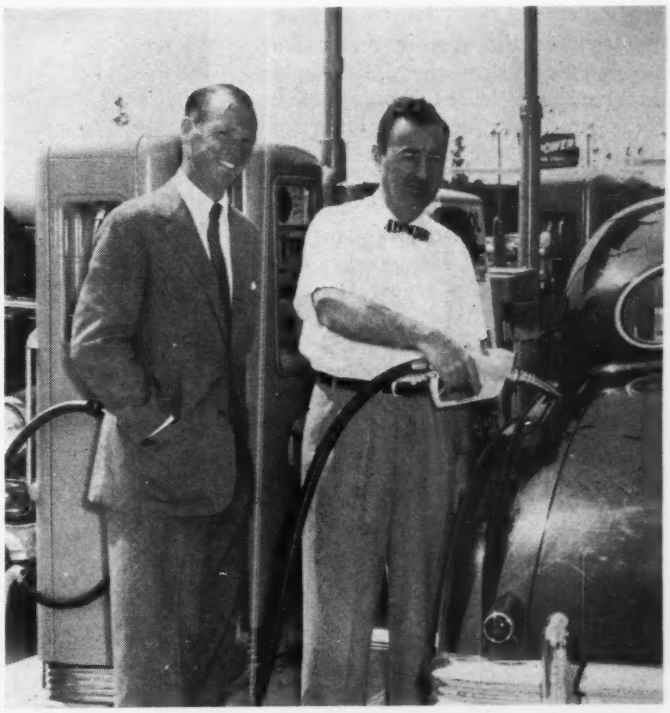
The Pennsylvania project was born out of the needs of the new Fairless Works of U. S. Steel, being completed today on the Delaware River about 25 miles above Philadelphia, four miles above Bristol and seven miles below Trenton. It's not that the steel mill employees themselves would be apt to buy so many homes . . . obviously not, because when the mill is finished it will only employ 5,000 workers. But the fact of the steel mill being located there is making quite an industrial development of the area round about.

So far only a minority of the Levitt homes are occupied by steel workers; oddly, more than 40% commute by train to Philadelphia, finding pleasant homes in this rural community, and at low cost for what they offer.

A two-bedroom 800 sq. ft. home with a high attic for later expansion sells for $8,900 and a three bedroom 1,000 sq. ft. home brings $11,000. The prices include principal appliances—automatic washer, refrigerator and the like.

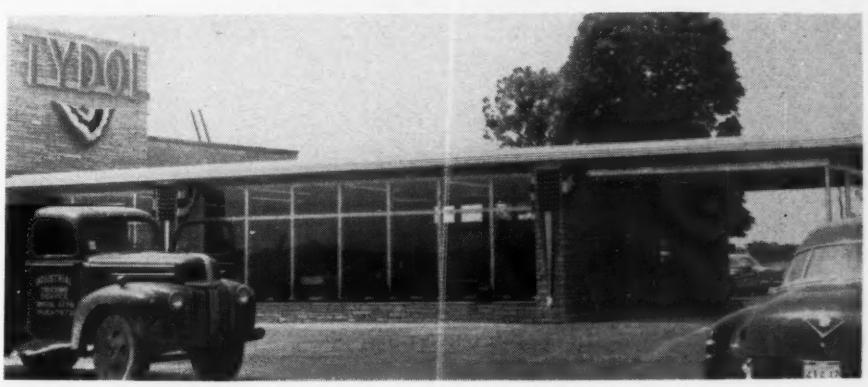
Meenan Oil again has better than 99% of the business. There's nothing that forces the folks to buy from this company, but Meenan does have the

New gasoline service *station at the community center which was dedicated with a grand opening party in late June. The artist's sketch is used because the photos were too confused with pumps, cars and people. The far end of the station, beyond the second tower, is the fueloil administrative office for sales, collections and the like. One unique feature of this station, which was designed by Roy Henwood, is a series of islands in the rear where customers can do their own tinkering if they like. Each has a vacuum cleaner for upholstery, air for tires and water for batteries. This is the only station in town.*



Opening *the new station with a flair, Bill Levitt, world's largest home development builder, feeds gasoline into Bill Kenny's car, as Kenny gets amusement from the situation.*

Fueloil office, *showing a drive-in bay with cashier's window, so the lady can pay bills from her car. Where folks live on tight budgets they often pay first at spots made most convenient for them.*



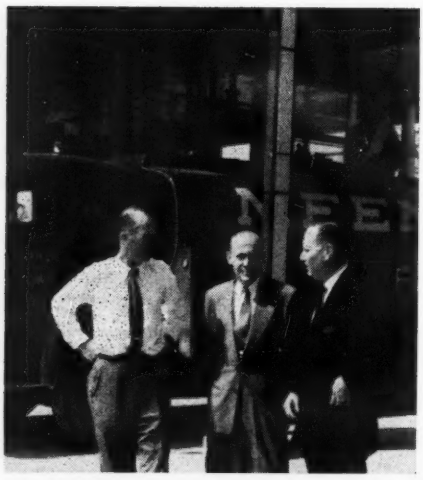
initial introduction to the business through servicing the burner. All oil-heating at Levittown, Pa., is by York. Levitt covers the first year free warranty period by hiring Meenan to handle it and it's done on a very low charge basis to Levitt providing the customer uses Meenan oil.

Then the budget plan gets going and helps tie the folks together. This is based on $12 a month for 11 months and better than three-fourths of the home buyers sign up for the budget the first year. The fueloil budget is explained by the real estate salesman at the time of purchase.

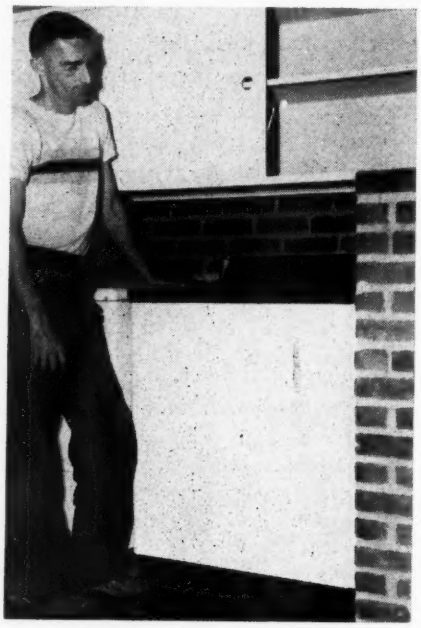
Once getting these customers on the books, Meenan knows how to hold them, with fully automatic deliveries (including 100% VENTALARM signals) and with extra good service, which is not difficult since all heating layouts are from the same manufacturer.

One unique feature of the Meenan operation here is a combination degree-day and route method of operation. Degree days are calculated in the normal way but instead of being applied to a single residence they apply to a zone, comprising 75 houses. That is

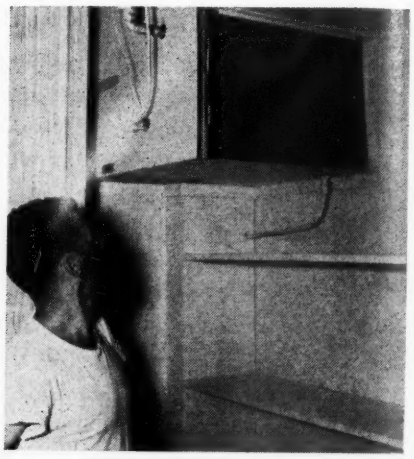
(*Please turn to page* 176)



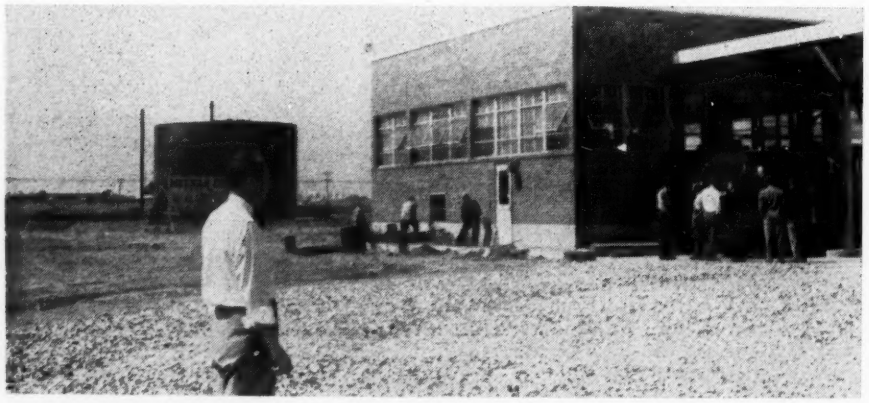
Owners and designer *at the loading bays, with one of the 3,300 gallon dual-equipped trucks being filled by Bill Slater who heads building and truck maintenance. In the foreground, left to right, are William F. Kenny, president of Meenan Oil, New York, W. C. Henwood, vice-president, and his brother Roy M. Henwood of Henwood Associates, New York, designers of the terminal. W. C. Henwood is moving shortly to Pennsylvania to look after developing a good business in the area. The terminal in addition to serving Levittown also sells to other fuel-oil marketers who load there.*



York-Shipley *furnished the heating units for all Levittown homes. Service man Duke Quigley shows us one installed in a kitchen, counter-top height.*

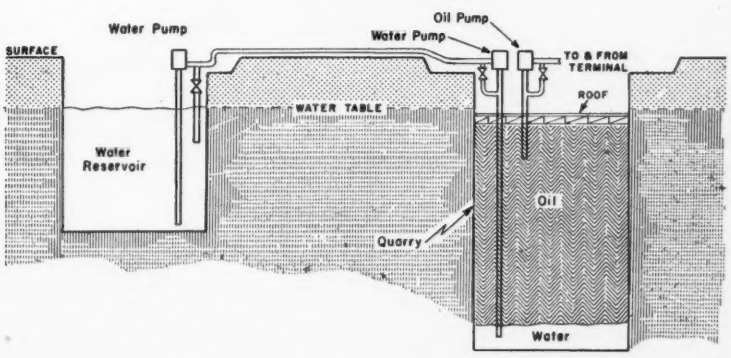


Airconditioning *for the homes, also by York-Shipley, is being shown by service man Lester Pope. Above is the unit installed high in a closet within the house and below is the compressor and condenser installed outside the house in a garden tool room behind the garage. These are 1½ ton units. Levitt first added only $250 to the house price to include this cooling equipment, absorbing a part of the cost himself. However, they did not sell in sufficient quantity to justify making a sacrifice, so he changed the price to $500 and about the same percentage of buyers take them. It looks like it will be hard to get anything extra for cooling from most small income folks who buy this grade of homes.*



Louis Funston *in foreground supervises the finishing touches at the terminal. He is to be operations manager at the new Pennsylvania branch. The first tank, in the background, holds 840,000 gallons and is connected by pipeline to the barge terminal. Just behind the tank is the four-track main line of the Pennsylvania R.R. and beyond that can be seen buildings under construction for the community center of Levittown.*

SKETCH OF PROPOSED INSTALLATION FOR UNDERGROUND STORAGE OF OIL.
(SHOWING A PONTOON-TYPE ROOF)



Esso Exploring Slate Pits For Seasonal Fueloil Storage

PLANS LOOKING TOWARD the adaptation of abandoned slate pits in northeastern Pennsylvania as underground reservoirs for the seasonal storage of home heating oil are being considered by Esso Standard Oil Company.

The project, the first of its kind in this country, although the principle has been applied elsewhere, was described by William Naden, vice president in charge of manufacturing, as having tremendous possibilities for the petroleum industry in meeting the growing seasonal nature of its operations.

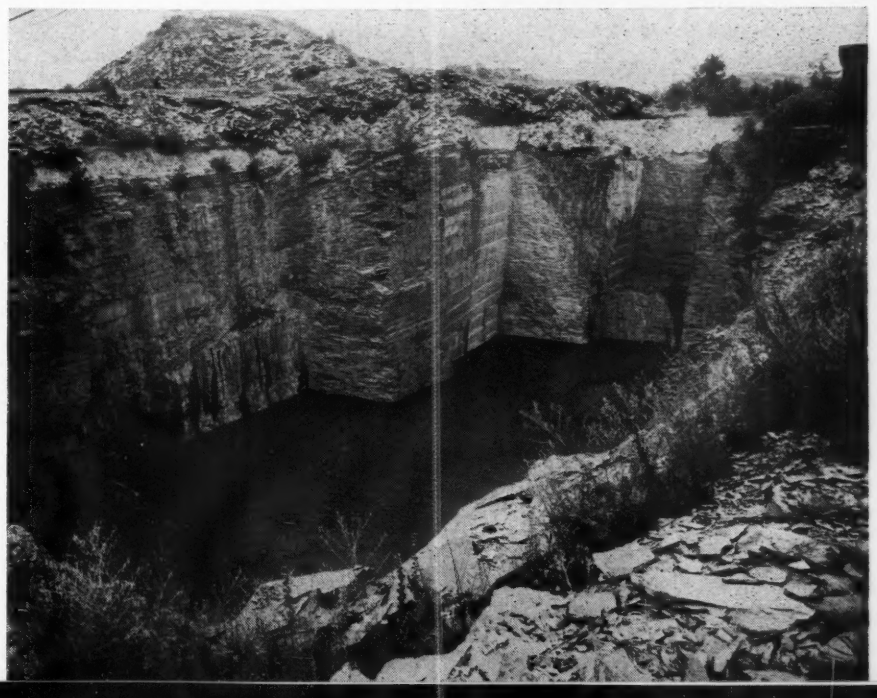
The company has taken options on 11 slate quarries or pits in the Pen Argyl section near Bethlehem which have a total potential capacity of 13 million barrels of heating oil. This is equivalent to the seasonal heating requirements of more than 325,000 average homes. The pits range in dimensions from 100 to 300 feet deep, 200 to 500 feet long and 140 to 270 feet wide. Except for suitable protective roofing and other necessary facilities, the pits with relatively minor engineering can be converted to large storage reservoirs.

Esso has been investigating the possibilities of various types of underground reservoirs adjacent to northeast seaboard states where the greatest seasonal storage needs exist. The slate quarries in Pennsylvania were selected by virtue of location, size, convenience of existing facilities and the fact that slate, an inert material, does not contaminate the quality of heating oil.

Initially, the company is considering the operation of only one pit which has a capacity of three million barrels. The mine is 270 feet deep, 350 feet wide and 250 feet long. The capacity of existing pipeline facilities which may serve it, however, will limit the storage to one and a half million barrels. It is presently estimated that the cost of adapting the pit to storage would be approximately $1,000,000 and would take about a year to complete facilities.

The storage operation will be carried out by removing water from the bottom of the pit as one is pumped in at the surface. To insure that the water pressure on the walls of the pit is always greater than the pressure of oil, the oil level will be held below the level of the surrounding water table. Any leakage would then be in the direction of water into the pit. Water seepage would be periodically pumped from the pit as necessary to keep the oil level below the water table.

When oil is to be removed in the heating season the procedure will be reversed and water will be pumped into the pit below the level of the oil. This requires the use of a second quarry as a water reservoir which will supply water to displace the oil and act as a safeguard against oil heating water being pumped into natural streams and causing a pollution problem.



A partially flooded section of a working slate quarry which shows the essentially vertical solid slate walls of the pit and one of the features which make it suitable as a reservoir for seasonal storage of heating oil are shown above. Water level is controlled in active mining pits by pumping.

Profit Participation boosts Deliveries

Booma-Breed's bonus Plan lowers Costs and moves Gallonage

by
Charles Burkhardt

GENIAL ROLAND BOOMA, president of Booma-Breed, Inc., leaned back in his chair and reminisced for a moment. "I can remember," he said, "when Bill Breed and I put up a thousand dollars each, back in the early thirties at the height of the depression, and went into the oilheating business."

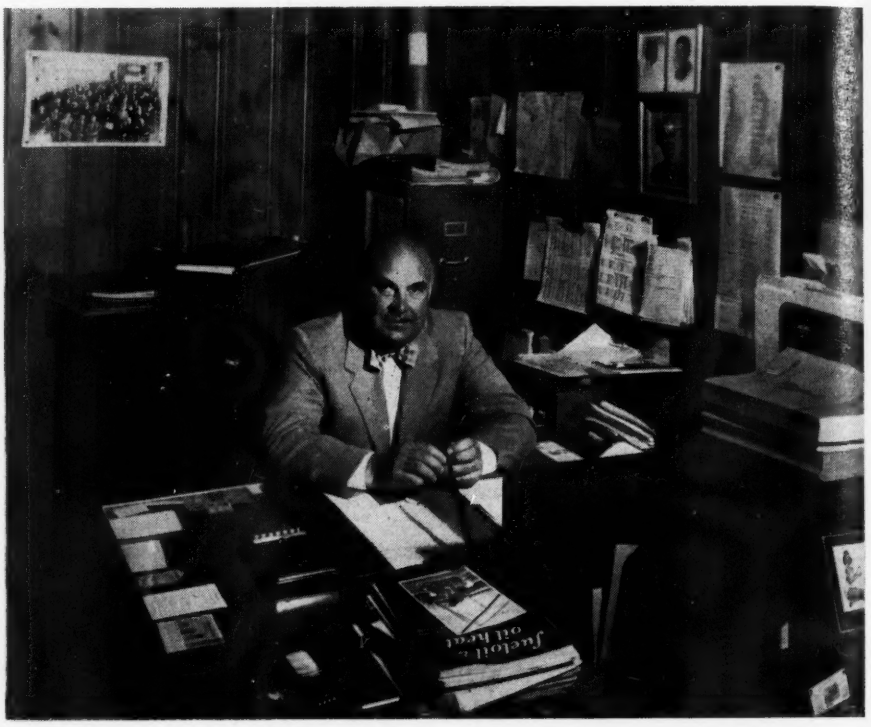
Over twenty years have passed since that time and Booma-Breed of Lynn, Massachustts, has grown considerably. Now the company has about 3,800 fueloil customers plus 3,200 service customers.

Rolley Booma continued with more emphasis as he stirred his memory. "This used to be the Timken distributor's office for this area but as things developed we eventually took it over ourselves and conducted our business from it. Things were not easy then but as the years passed we began to catch hold and our growth became steady and consistent. Today we move about 6 to 7 million gallons of fueloil a year and at a cost that is at least 10% lower than that of the average fueloil distributor hereabouts."

Johnny Stevens, a former English teacher who has been working for Booma-Breed for 18 years, broke in at this point. "We have always been pretty cost-conscious around here, and having been a fueloil truck driver myself, I know how important a key to the cost picture the driver is. Get him on your side and half the battle is won."

Stevens is now manager of the Oil Department and is responsible for the operation and results when it comes to gallonage moved. He is an enthusiastic supporter of an effective incentive plan for the truck drivers; the plan is an integral part of the Boom-Breed setup.

"Before we put in our incentive plan," Rolley Booma continued, "we had 8 trucks on the road and delivered about three million gallons of fueloil a year. There was nothing unusual about that, we know. Our eight drivers,



Friendly *but hard hitting, Roland Booma is president and general manager of the company. A firm believer in incentive plans, he has drawn great satisfaction from the startling results of their own successful operation based on increased earnings as an incentive.*

on that route system we used prior to 1940, delivered about 32 to 3,300 gallons a day."

Now suddenly, Booma's voice became a little tense, a note of something akin to pride entered it, he began to speak more rapidly and a broad grin spread over his face.

"Today with 9 trucks, just one more, we are moving between 6 and 7 million gallons. With that one additional truck we are delivering over twice as much fueloil as we did before we put our incentive plan into effect in 1940. Our drivers increased their delivery gallonage from an average day of 3,300 to about 6,000. There is just no substitute for that incentive

TABLE 1

Analysis of Operation **Truck #25**
Period: Jan. 1st to 15th, 1953 **Capacity 2,080 Gallons**

COSENTINO

Day	No. of Loads	No. of Del's.	Gals. Deliv.	Miles	Hours	Payroll Value	Gals. Per Hour	Gals. Per Mile	Wage Cost Per Gal.
1 Hol.	1	7	1,445	65	8	$ 13.00	181	22.2	.899¢
2	3	41	7,857	90	8	18.52	982	87.3	.236
3	3	36	5,725	94	8	14.26	716	60.9	.249
4 Sun.									
5	4	42	6,898	74	8	16.60	862	93.2	.241
6	3	38	6,160	77	8	15.13	770	80	.246
7	4	43	7,435	71	8	17.68	929	104.7	.238
8	6	59	11,264	103	10	25.34	1,126	109.4	.225
9	4	36	6,451	98	9½	15.71	679	65.8	.244
10	5	51	8,723	106	11	20.26	793	82.3	.232
11 Sun.	2	19	3,597	58	6	15.00	599	62	.417
12	4	43	8,031	83	8	18.87	1,003	96.7	.235
13	5	39	6,975	106	8	16.67	872	65.8	.239
14	3	40	6,929	96	8	16.66	866	72.1	.241
15	4	50	7,427	85	8	17.66	928	87.4	.238
	51	544	94,917	1,206	116½	$241.36	815	78.7	.254¢

plan," he concluded.

Booma-Breed's incentive plan is really unique but in a sense its results are phenomenal and prove the rule that man's desire to profit is a basic, sincere motive that can always be appealed to. The incentive plan which was instituted in 1940 is tied in with the degree-day system with all the customers' tanks being equipped with VENTALARM signals to provide fully automatic delivery. Ninety-eight percent of the tanks are 275 gallon capacity.

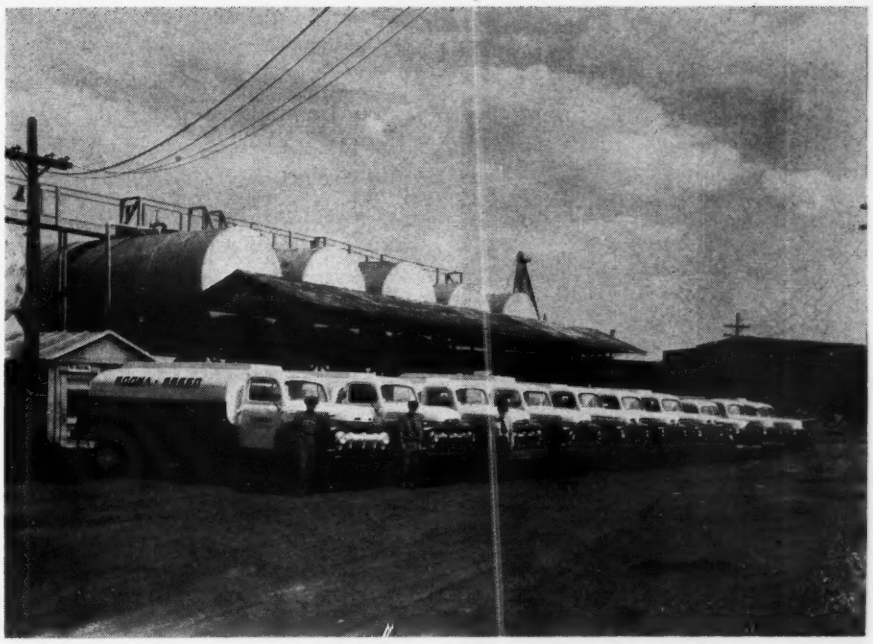
When the incentive-degree day plan went into effect in 1940, the company, as previously noted, was using 8 trucks to move 3 million gallons a year. The number of trucks dropped right away to 6 due to the increase in efficiency. As the plan gradually raised the efficiency of operation, the daily gallonage moved up from 3,300 gallons a truck to in some cases 6,500. Now 9 trucks deliver twice as much oil as 8 used to.

Under the incentive plan a driver is guaranteed a base pay of $60 a week. He also has a base which is computed on a daily rate. This base or quota is established in gallons and varies with the size of the truck and the territory. The base quotas vary from 3,200 gallons all the way up to 3,600. Once a driver exceeds his daily base quota he begins to receive incentive pay.

Originally the incentive plan was worked on a base that was computed on a weekly rate but this proved unsatisfactory and the quota was changed to the daily basis.

The drivers usually reach their base quota in the early afternoon and from there on they make incentive money. Since the average base is about 3,300 gallons and the average delivery per man about 6,000, it means that the drivers are averaging about 2,700 gallons delivered from early afternoon till five, which is quitting time.

The drivers pick up their oil at three widely separated points, Danversport, Salem and Revere and many times have a six and a half mile drive to load their trucks. Three of the eight drivers deliver fueloil all year round and the other five work on installation, service and summer overhauls during slack season. The company makes about 1,500 summer overhauls a year.



Booma-Breed's *newly acquired bulkplant is the background of this picture of the firm's 10 trucks. At peak 9 trucks are rolling and one is held in reserve.*

The service department *poses for its picture. These men handle a total of 7,000 accounts and do about 1,500 complete summer overhauls.*

TABLE 2

Analysis of Operation **Truck #17**
Period: Jan. 1st to 15th, 1953 **Capacity 2,030 Gallons**

	PRONKO								
Day	No. of Loads	No. of Del's.	Gals. Deliv.	Miles	Hours	Payroll Value	Gals. Per Hour	Gals. Per Mile	Wage Cost Per Gal.
1 Hol.									
2	3	37	5,818	64	8	$ 14.46	727	90.7	.249¢
3	3	33	5,286	59	8	13.39	661	89.6	.253
4 Sun.									
5	3	33	5,557	61	8	13.92	695	91.2	.251
6	3	39	6,307	61	8	15.63	788	103.4	.248
7	4	38	6,667	78	8	17.64	833	85.5	.265
8	3	38	6,814	66	8	19.26	852	103.2	.283
9	3	30	5,246	57	10	13.75	525	92	.262
10	3	38	6,539	77	9½	15.43	688	85	.236
11 Sun.	2	23	3,867	105	6	21.00	645	36.8	.543
12	4	36	6,395	77	9	15.62	711	83.1	.244
13	3	35	5,930	62	8	14.68	741	96	.248
14	3	37	5,886	70	8	14.58	735	84.1	.248
15	2	32	4,891	53	8	12.59	611	92.3	.257
	39	449	75,203	890	106½	$201.95	706	84.5	.269¢

Bill Breed, *treasurer of the company, went into business with Rolley Booma 20 years ago and has had a large share in the work that has built the company to its successful position of today.*

If the base quota is reached late in the afternoon because of bad weather or another circumstance, not the driver's fault, he receives overtime, of course, from 5 p.m. on. This overtime payment is matched against the incentive earnings made by exceeding the quota and the driver receives whichever is the larger amount.

The specific results of the incentive are shown markedly by the figures in Tables 1 and 2, which are performance records over a two week period of two of the company's drivers. The first two weeks in January 1953 are shown.

Cosentino, who was top man for the period in question actually reached an 11,264 gallon day on January 8th and earned $25.34 for that day. The wage cost per gallon for that day was all the way down to .225¢ a gallon. Average wage cost per gallon for the full two week period for this driver was .254¢ a gallon as shown in the table. The wage cost of delivery of oil on Sunday and holidays increases considerably and averages more than double that of the normal weekday wage cost.

The low wage cost per gallon to the company is reflected in reverse by the comparatively high earnings of the drivers during the two weeks, one making $241.36 and the other $201.95. Even with these good earnings the amount of overtime other than Sundays and the holiday was small. Cosentino worked only 6½ hours overtime in delivering 94,917 gallons while travelling 1,206 miles. Pronko worked 4½ hours overtime and delivered 75,203 gallons while travelling 890 miles. For 1,206 miles Cosentino averaged 78.7 gallons per mile and Pronko 84.5 gallons per mile for the 890 miles he covered.

The averages of both drivers for the 15 days in question are worth comparing with the national and regional averages for 1952 as they appeared in the January 1953 issue of FUELOIL & OIL HEAT:

CUSTOMERS SERVED PER TRUCK #2 OIL:

New England	*Nation*	*Booma-Breed*
268	310	422

GALLONS DELIVERED PER HOUR:

New England	*Nation*	*Cosentino*	*Pronko*
510	508	815	706

GALLONS DELIVERED PER MILE:

New England	*Nation*	*Cosentino*	*Pronko*
48	58	78.7	84.5

PERCENT OF CUSTOMERS WITH 275 GALLON TANKS:

New England	*Nation*	*Booma-Breed*
90	76	98

TRUCK DRIVER'S TOP WAGE RATES PER HOUR, MEDIUM CITIES:

New England	*Nation*	*Cosentino*	*Pronko*
1.49	1.53	2.07	1.90

Wage costs per Gallon

Wage cost per gallon figures are worth a note too, Cosentino's was .254¢ and Pronko's .269¢ while .35 cents is considered as pretty good by most fueloil outfits. However, this is purely a relative comparison as the hourly wages paid drivers vary sharply as to geographic region and size of cities.

Significantly, these performance figures of Booma-Breed's two drivers show that tank size, distance between drops, size of trucks, etc., can all become merely academic considerations in achieving low costs while the profit motive of the driver becomes the all important factor that essentially reduces in importance all other cost factors. The basic interdependence of incentive and productivity is very clearly illustrated for all to see and offers a valuable guide to very profitable and successful employee-employer relations.

The drivers also come in on Booma-Breed's semi-annual bonus plan which is in addition to their incentive earnings. The management each year sets aside 25 percent of the gross annual profit before taxes are deducted. This amount is split up among all 48 employees of the company on a base that is tied only to the volume of their earnings. This bonus is distributed in two pieces, one prior to the 4th of July and the other around Thanksgiving time. Last year a $13,000 pie was cut up this way for the benefit of all employees. In order to keep the bonus volume up there have been times when as much as 34 percent of the gross profit before taxes has been split up between the employees.

Booma-Breed now looks back on 20 years of growth, 14 of which have been with the incentive plan. Rolley Booma says they will never go back to the old system, "the incentive plan has helped keep our men satisfied and the company has had ever increasing satisfaction from their work; that's our story and we like it."

John Stevens *(seated), Oil Department manager, and Albert Burgess, assistant Oil Department manager, are responsible for the smooth, efficient delivery of millions of gallons of fueloil.*

Leasing Trucks for Fueloil

Some Marketers find that it pays with their particular Operations

by
Robert Gray

QUITE A NUMBER of fueloil distributors throughout the country find it practical to lease some extra trucks at the peak of the winter season, to hold down their total investment in their fleets. Perhaps one out of each five or six oil men does this at times, and they have for years. But the idea of leasing a whole fleet for the entire fueloil operation is much less recognized or understood. There have been several requests for us to see what we could learn about it.

From the brief investigation that we have been able to conduct so far it becomes clear that there is no cut-and-dried pattern for a leased-truck style of operation . . . perhaps the idea is too new to our industry to have had time to shake down.

Out in the Northwest last spring we spent some time looking into the methods of the Multnomah Fuel Co., Portland, Ore., as explained by manager Jim Yeomans. This company owned 27 trucks, some on fueloil, some on LP Gas. About 15 months ago they sold these outright to a leasing company and then rented them back. Actually they only sold the chassis in each instance and kept title to the tanks. They did it for two reasons; (1) they would release considerable capital that they could then use to enlarge their sales; (2) they expected better truck operation in the hands of experts.

They were not disappointed on those two items . . . they got as much or more benefit than they expected. Then, however, they did save some money on operating costs which was not anticipated. In the first full year under leasing, their average operating cost per unit, not including driver, was $1,340. The previous year it had been $1,420.

Yeomans believes that no company can economically operate trucks unless it has at least 100. He points out that with fewer he cannot possibly afford a trained fleet manager. Asked what constitutes such a person, he explained that it's a man who knows just which bolt is good for 32,000 miles under a particular type of work load, and who then has it changed at 30,000. Suffice to say, under the first year of leasing there were fewer trucks tied up, and for fewer days, than the company had ever experienced under its ownership of the units.

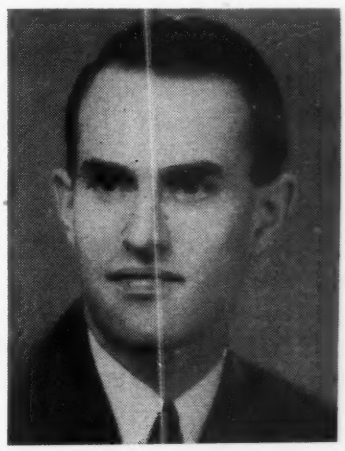
He also says that a fleet of 100 or more units can get special prices on almost everything it needs to buy, including new replacement trucks. Tires are cheaper, batteries are cheaper, insurance is cheaper.

The rate charged by the leasing company is actual cost for everything plus 15% for management and this is the 15% that's supposed to be saved through larger operation.

Multnomah trucks deliver both furnace oil and stove oil for space heaters, as is typical of that market, and they average about 400,000 gal. per truck during a season. The operating cost under the leasing arrangement is just about ¼¢ a gallon, not including driver, or $1,000 a year for the exclusive fueloil trucks (this omits the LP Gas trucks which are heavier and travel considerably farther).

The leasing company paints the trucks when they need it and keeps everything shipshape.

Yeomans finds the one tough spot in the picture is holding his drivers. The leasing company prefers to supply drivers, but Jim wants to keep his own men. The summer brings a real problem on this. Where he formerly used several on truck overhauls, paint jobs and the like, now he has to find other work for most of them. He can use a few on LP Gas trucks, for that business picks up through summer resorts. He takes time to find jobs for the others . . . with transfer companies, Coca-Cola marketers, fishing fleets and



Jim Yeomans

Leased trucks *of Multnomah Fuel Company, Portland, Oregon. The company has in all 27 units which it originally owned, sold to a leasing company and then rented them back at a saving.*

the like. Actually he did not lose any last summer, but it brought him some extra work to avoid it. But Jim considers this a minor hurdle.

In Philadelphia the Elliott-Lewis Co. has leased its trucks for about 10 years and found it quite satisfactory. Jack Campbell, president of the company, likes what they have and wouldn't change, although the arrangements are in no way similar to what we've just described out in Portland.

Non-profit delivery Company

Elliott-Lewis gets all of its fueloil, around 13 million gallons a year, from a large independent supplier in the harbor area. This supplier has set up a non-profit delivery company to take care of six of the fueloil distributors who buy its oil, and of these Elliott-Lewis is the largest.

The interesting development here is that even this cooperative delivery company does not own the trucks. It leases the chassis' from Yellow Trucks, Inc., and does then put on its own tanks and equipment. The delivery company pays Yellow for only the trucks it actually uses, week by week and mile by mile.

Campbell knows that he needs a minimum of five units the year around, so he keeps those permanently employed and, oddly enough, on those five Elliott-Lewis owns the tanks, but not on any others.

As the heating season approaches Campbell sizes up his volume of business and asks the delivery company to arrange for whatever it needs . . . for example on November 1 he might ask for an additional 10 trucks for 15 weeks. This time factor is important because Yellow charges a minimum rate per month plus a mileage rate beyond 300 miles.

The delivery company, because it works only with fueloil, understands automatic deliveries and operates them well. Elliott-Lewis has a teletype line to the dispatcher's office and each afternoon it orders the next day's deliveries, giving full detail.

The trucks are attractive, silver color with blue cabs, and they carry no names except the name of the delivery company on the door in 2" letters. The customers, however, recognize them as Elliott-Lewis trucks.

Two shifts are used in winter peaks, and this is advantageous because it spreads the fixed monthly charges over much wider gallonage.

Handling drivers in the summer is not too difficult because the delivery company can channel them through Yellow for the brewery trade, bottling and similar summer peak industries.

The Elliott-Lewis method is a little on the costly side compared to direct operation. Campbell knows this but doesn't fight it too hard because he recognizes that freedom from fleet management on his part gives him time for much more selling, which is his featured activity by choice. His company is selling currently a fourth of all oilburners installed in Philadelphia (over 2,000 Delcos last year) and he wants to devote most of his executive thinking to keeping this rolling, for most of these burner sales bring oil customers.

The third truck leasing operation studied was that of Brooklyn-Cornell Utilities, Brooklyn, of which Harry and John Bloomberg are the owners and operators. Harry takes executive responsibility for the fueloil and service end of the business while John masterminds the engineering and equipment sales and installation.

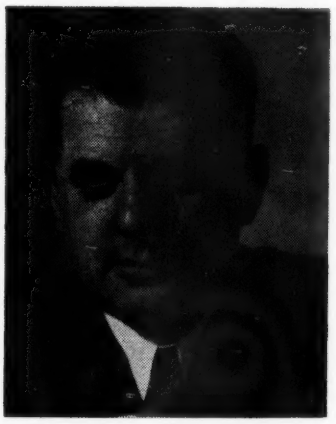
New York's earliest

This company incidentally has an interesting history, having installed the first oilburner for light oil in the City of New York back in 1919 in the Children's Court Bldg., Brooklyn. They were early Nokol dealers.

Through the years Bloomberg built up an important fueloil volume by taking contracts for oil after each burner installation. The oil was then delivered for him by a primary supplier and Bloomberg given a commission ranging from .5¢ to .7¢.

Came World War II with its rationing and shortages, and the supplier decided to simply adopt the customers and forget Bloomberg. Harry couldn't go out and buy trucks because the Government claimed he didn't need them . . . that the public wouldn't suffer, because it would be supplied by the same trucks that had been serving the accounts. That forced the company into truck leasing and they have never been sorry. They lined up with a very large leasing company, one that operates 5,000 trucks in New York and supplies many industries including odd applications like ambulances, ice cream peddling trucks, refrigerated meat carriers, etc.

It was very hard to find an oil supplier, the war having started, but finally Harry convinced Socony that his having the oil wouldn't require any larger total in the market, that it would simply go to customers that were rightfully his. His annual volume has grown by some six million gallons since that



Harry Bloomberg

first deal 11 years ago but every gallon has been bought from Socony. And incidentally, his former connection that tried to take his accounts got less than 10% of them.

Brooklyn-Cornell's leasing arrangement is again quite different from the two others that we have described. The trucks (Autocar) are specified by Bloomberg, including a choice of all accessories and fittings. They are 2,500 gallon size and cost just under $14,000 each. They are used exclusively by this one company . . . in other words they are never stripped for other off-season leasing.

The leasing arrangement that Bloomberg employs today is a quite complicated affair with a lot of side deals and minor considerations that have grown up with the years.

But basically the company pays in the general range of $150 a week for the three trucks it uses all year. It pays the same rate for an additional five trucks that it uses nine months and then a summer lay-up rate on those five

(*Please turn to page* 168)

Part VI: Oilburner control Series

White-Rodgers Controls

Oilburner safety Panels calculatedly designed to become Favorites of Servicemen

by
J. W. Schulz

YOU CAN EASILY inspect the contacts in a White-Rodgers oilburner safety control panel. You can easily clean them. You can take the control panel apart to any degree that plain curiosity or on-the-job necessity requires—do this with the manufacturer's blessing it seems, for the panel was built in a way that makes it easy for you to take it apart if you've a mind to.

If you are really a service expert, you can remove sub-assemblies from the panel, then put all the pieces back together again and wind up with a panel that works perfectly. I know dozens of servicemen to whom this is child's play. These experts know the A-to-Z as well as the A-B-C's of the equipment and circuits they use, and are the best kind of men to have on service calls when the going really gets rugged.

White-Rodgers calculatedly designed its control panels, which still are new to many oilburner men, to become the favorites of servicemen. By designing these panels so that they can be worked on easily or taken apart on-the-job, White-Rodgers pleased experts who have the ability and inclination to work on controls in basements. Of course, an expert or novice who does not want to use the easy-take-apart features of these panels does not have to; he can confine his service operations to using his screwdriver on terminal screws.

White-Rodgers went into the field and asked servicemen, "What do you want in a primary control that isn't available now?" and "What don't you like about the oilburner control panels you now are using?"

The result, says White-Rodgers, was the designing of a control panel that contains all the features servicemen want and none of the faults and weaknesses which servicemen listed as present in control panels they dislike.

White-Rodgers reports that the servicemen who were questioned said they wanted a sturdy control . . . lots of wiring space at the terminals . . . contacts a man can see and work on . . . timing adjustments . . . oversize contacts in relays and switches . . . accessibility . . . a rugged and simple combustion switch . . . a control panel that works on uncommonly low or uncommonly high stack temperature . . . ease of installation . . . simple two-wire circuits . . . a new type clutch for the combustion switch . . . fewer adjustments which must be given attention . . . and additional items of importance in a serviceman's daily activities.

The design engineers of oilheating equipment manufacturers also were consulted. They informed White-Rodgers of their needs regarding control response to different stack temperatures, control dimensions, timing requirements, etc.

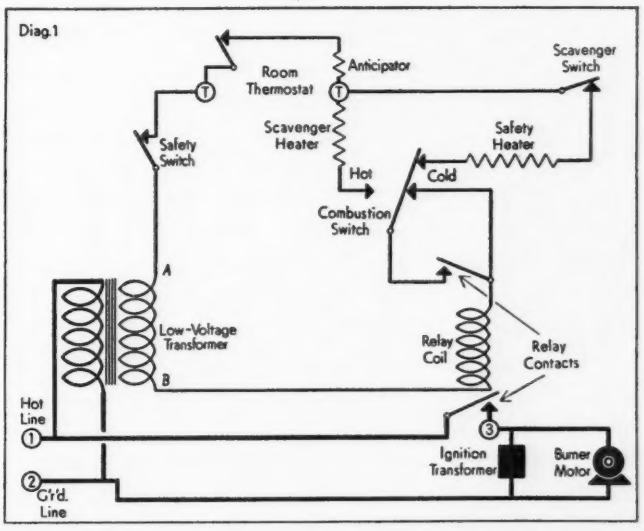
White-Rodgers did its best to accomplish the remarkable feat of building all the desired important features and characteristics into one control.

Several thousand safety control panels were completed and tested in the field on actual installations. Over a period of several years, painstaking check-ups were made of on-the-job performance of the panels. This provided pointers for improvements, gained by changing minor details. Out of these efforts came the Type 611 panel for constant ignition oilburners and Type 610 panel for intermittent ignition burners covered by the accompanying wiring diagrams and photographs.

DIAG. 1 appears complicated to newcomers at studying the internal wiring of oilburner control panels, but actually becomes simple after you study it a few minutes. A thorough understanding of such a wiring diagram is necessary for understanding the functions of the parts in a burner control panel.

The low-voltage transformer in DIAG. 1 provides the 24-volt current for the relay coil and two heating elements in the control panel. This 24-volt current powers the room thermostat circuit (see the two terminals marked "T") and of course flows through the heat anticipator resistance in the thermostat.

In studying DIAG. 1, first consider that the burner has been idle because the room thermostat circuit has been open for, say, 15 minutes. The safety switch is closed because the burner panel is not "off on safety," but is ready for normal starting of the burner. The scav-



Diag. 1—*Internal wiring of White-Rodgers Type 611 oilburner control panel for constant ignition. Flow of current through scavenger heater for 45 seconds causes scavenger switch to open; cooling of scavenger heater causes scavenger switch to close. Scavenger heater is warm, in the circuit, all the while the burner runs normally with the combustion switch in its hot-stack position.*

enger switch is closed because the scavenger heater is cold. The scavenger switch and scavenger heater both are parts of one assembly; a flow of electricity through the scavenger heater for about 45 seconds raises the temperature of a bimetal strip and cause this to open the scavenger switch.

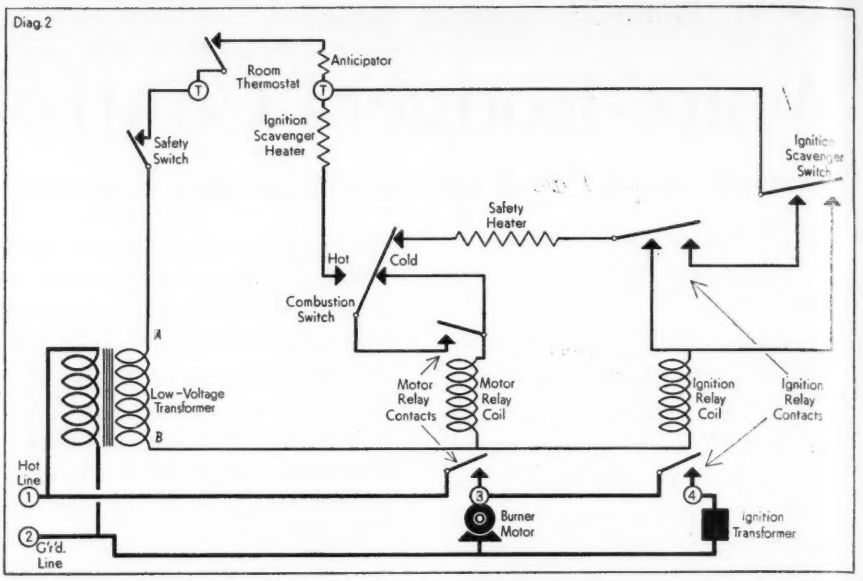
With the burner idle and ready to start, the scavenger heater is cold and the scavenger switch is closed. Under these conditions, the smokepipe is cold, therefore the combustion switch is in its cold position as DIAG. 1 shows; both sets of relay contacts are open, for to close both sets of contacts the relay coil must receive current and the armature of the relay must snap in.

The relay contacts above the relay coil in DIAG. 1 are low voltage; you can call them lock-in or hold-in contacts. The relay contacts below the relay coil are line voltage. When closed, they give line-voltage current to the burner's ignition transformer and motor. With the burner idle but ready to start, then, both sets of relay contacts are open as they are in DIAG. 1.

Close the circuit of the room thermostat to start the burner under these conditions, and low-voltage current flows from point "A," then through the safety switch, room thermostat, scavenger switch, safety heater, and cold contacts of the combustion switch. The combustion switch is opened and closed by the bimetal helix of the control panel, which usually is located in the smokepipe of a furnace or boiler.

From the cold contacts of the combustion switch, the low-voltage current flows to the relay coil. One end of the coil is connected to point "B." The end result of all this is that closing the room thermostat circuit (or putting a jumper or control of any kind across the terminals marked "T" to complete the circuit at this point) causes the relay coil to receive current. The relay snaps in instantly when this circuit is completed. Both its upper and lower contacts close. The burner starts because the lower contacts give line-voltage current to the ignition transformer and burner motor. You can imagine this panel is connected to a typical pressure burner.

After starting properly because it, and particularly its ignition system, are



Diag. 2—*Internal wiring of Type 610 panel for intermittent ignition. When panel is ready for burner to start, completing the room thermostat circuit (shunting two terminals marked "T") causes the ignition relay coil to receive low-voltage current. That's the first thing that happens. Following this, ignition relay snaps in and closing of the upper contacts shown here forwards current to the motor relay coil. All this happens faster than a wink of the eye, so that the two relays appear to snap in simultaneously—but the fact is the ignition relay snaps in first, and the snapping in of this relay is what closes the motor relay. Thus the motor relay cannot snap in unless the ignition relay snaps in first. The text of the article explains how you can prove this to your own satisfaction. Notice that opening the line-voltage contacts of the motor relay (connected to motor live terminal marked 3) cuts off flow of current to post 4, live terminal for the ignition transformer. Thus there can't be ignition spark without the burner motor running.*

in good working order, the oilburner fills the smokepipe with hot gases that affect the bimetal helix of the stack-mounted control panel.

The shaft within the helix turns. It moves the switch blades of the combustion switch. This is important: First the hot-side contacts of the combustion switch close. Second, the cold-side contacts open. These are so-called overlapping contacts with the result that the left-hand contacts in the drawing close before the right-hand contacts open.

The flow of hot gases through the smokepipe, through the action of the combustion switch, first completes a circuit that involves the scavenger heater, next breaks the circuit that involves the safety heater. The lock-in or hold-in contacts above the relay coil in the drawing are closed at this point —they were closed when the relay snapped in and started the burner.

Current now is flowing through the scavenger heater, then in the drawing down to the hot-side contacts of the combustion switch, down to the lock-in or hold-in contacts of the relay, and down to the relay coil. Because of this flow of current, the scavenger heater causes the scavenger switch to open in about 45 seconds (from the time the hot-side contacts of the combustion switch closed).

When the room thermostat circuit is opened, the relay coil no longer receives current from the low-voltage transformer. The relay drops out. Its contacts open and the burner stops. Now the burner cannot be re-started until the scavenger heater has cooled off sufficiently for the scavenger switch to close. Open the main switch after the burner has been running normally about ten minutes, then immediately close the main switch. The burner will stop and remain idle for about one minute. In waiting for the burner to start again, you are waiting for the scavenger switch to close.

A momentary power failure that

occurs with the burner running normally will cause the burner to stop, remain idle about one minute, then restart when the scavenger switch closes.

If the smokepipe does not become warm properly after the thermostat circuit is closed and the burner motor is started, the combustion switch will remain in its starting, cold-side position. In about 90 seconds, the safety heater will become hot enough to affect the bimetal latch of the safety switch (this bimetal latch is close to the safety heater) with the result that the contacts of the safety switch will snap open. These contacts will remain open until given manual attention by someone. The burner will remain idle, "off on safety," until the red re-set lever of the control panel is tripped manually to re-start it.

If the temperature of the smokepipe gases drops after the burner has been running normally for, say, ten minutes, the combustion switch goes from its hot-stack to its cool-stack position. Because the circuit that includes the safety heater and scavenger switch is open at the scavenger switch, the burner will stop and remain idle until the scavenger heater cools and closes the scavenger switch. As a result of flame failure, then, the burner will stop, wait about one minute, then start again.

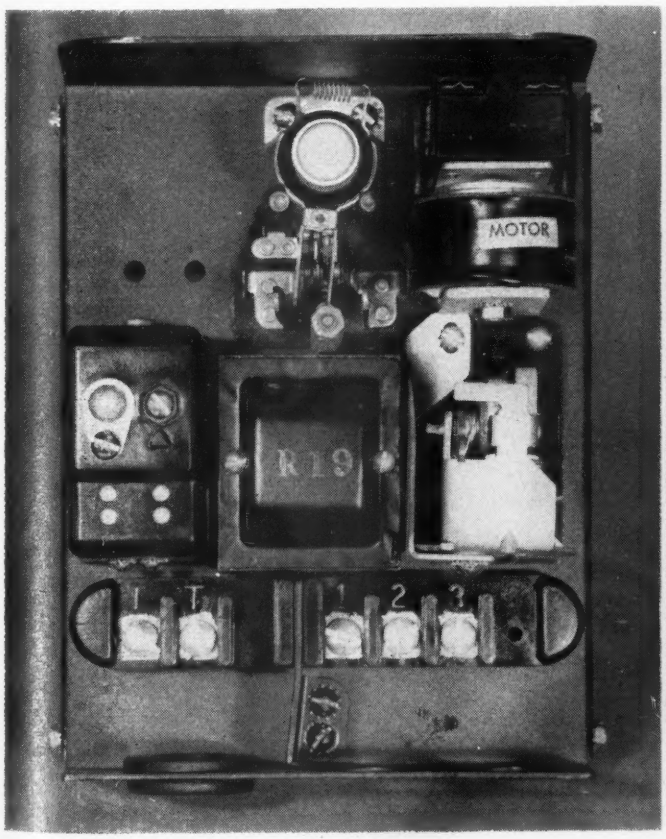
DIAG. 2 shows the internal wiring of the Type 610 White-Rodgers oilburner control panel, designed to provide intermittent ignition.

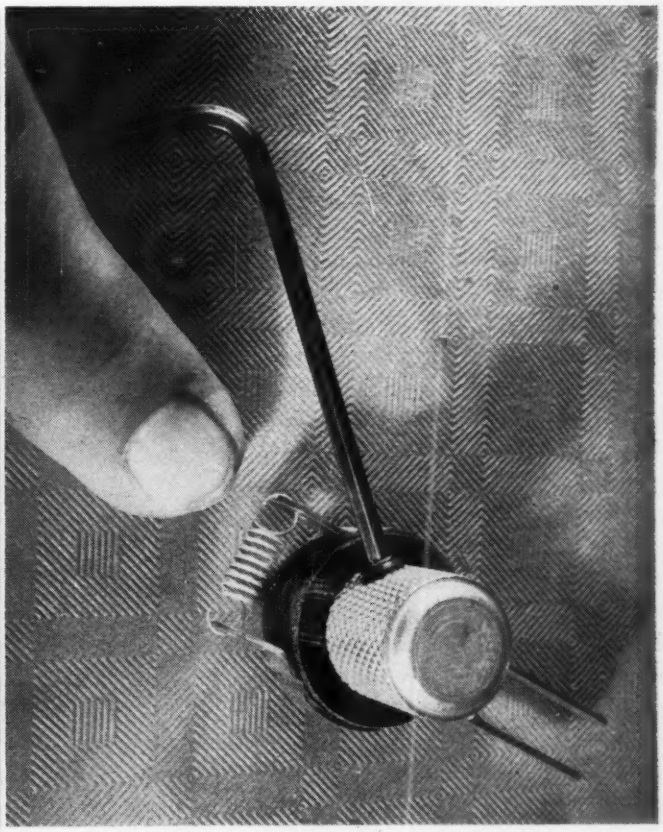
In DIAG. 2, the ignition scavenger switch is shown open to emphasize that the burner cannot start with this switch open. Now consider this switch closed; the burner will start when the thermostat circuit is closed.

Completing the low-voltage circuit by conecting a control or jumper across the two thermostat circuit terminals, both marked "T," causes current to flow in an obvious manner to the ignition scavenger switch, then in the drawing down to the ignition relay coil, then to point "B." The ignition relay snaps in instantly when the thermostat circuit is closed; the contacts above and below the ignition relay coil snap shut. The ignition transformer receives current from post 4. The closing of the contacts above the ignition relay coil forwards current to the safety heater; the current goes on through the cold-side contacts of the combustion switch and on to the motor relay coil. The ignition relay must be snapped in to permit snapping in of the motor relay.

First the ignition relay snaps in, then the motor relay. However, the time lag involved in a small fraction of a second—it compares with the clicking of

Left, *head-on view of Type 611 White-Rodgers stack-mounted panel for constant ignition. Space at the upper left is for an ignition relay, used in Type 610 intermittent-ignition panel, which appears identical to motor relay in this control. Before using an Allen wrench to remove the knob and clutch assembly of the ignition switch, examine this assembly carefully while it's in place, so that you will know how to replace it properly.*





Right, *the knob and clutch assembly removed from the control. Finger points to the spring of the friction clutch. An ingenious arrangement causes greater slipping of the clutch with the switch blades against their stops than with the switch blades in-between and able to move. This avoids loading and distorting the bimetal helix unnecessarily. Servicemen who like this panel find this combustion switch and clutch arrangement an outstanding development.*

a high-speed camera shutter—with the result that the two relays appear to snap in simultaneously. Hold the ignition relay out forcibly when you close the thermostat circuit, and you will prove the motor relay cannot snap in until after the ignition relay has snapped in.

Proper warming of the smokepipe bimetal helix, soon after the burner motor starts causes (1) closing of the hot-side contacts of the combustion switch, followed by (2) opening of the cold-side contacts of the combustion switch. The circuit that includes the safety heater is broken; the circuit that includes the ignition scavenger heater is closed.

About 45 seconds from the time the ignition scavenger heater is put into the circuit and starts heating, it has its effect on the ignition scavenger switch—it causes this switch to open. The result is that the circuit to the ignition relay coil is broken. The ignition relay drops out, cutting off the ignition system.

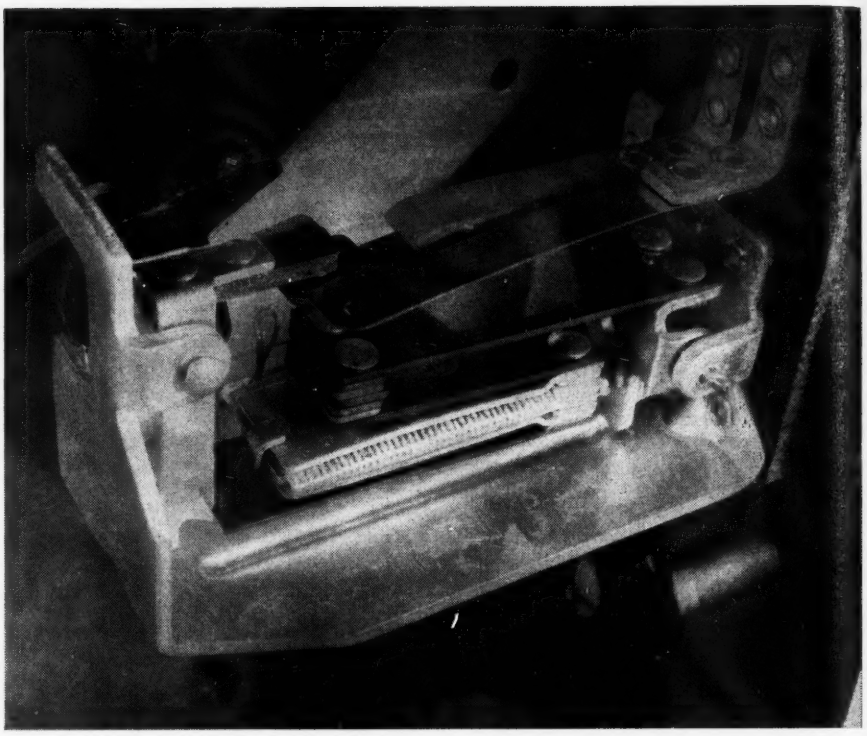
Actually the ignition can be cut off from 45 to 90 seconds after the hot-side contact of the combustion switch is closed, for the control panel has an adjustment for this timing.

After it stops, the oilburner cannot start again until the ignition scavenger switch closes. After the burner has been operating for, say, five minutes, if you open and quickly close the oilburner main switch the burner will stop, wait about one minute, then re-start. While you wait for the burner to re-start when you try this, you are waiting for the cooling of the ignition scavenger heater and the resultant closing of the ignition scavenger switch.

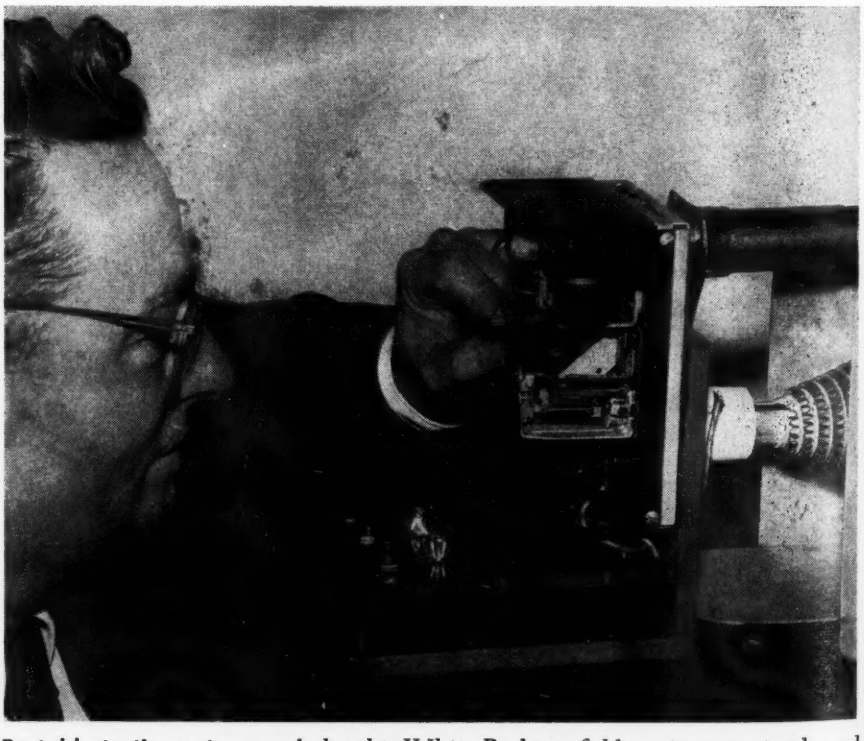
In all White-Rodgers oilburner control panels (both constant-ignition type and intermittent-ignition type), while the oilburner runs normally with its smokepipe warm the ignition scavenger heater is in the low-voltage circuit and is warm, and as a result the ignition scavenger switch is open.

Once stopped, the burner cannot re-start until the ignition scavenger switch closes as a result of the cooling of the ignition scavenger heater. The simpler terms "scavenger heater" and "scavenger switch" are used for the

(*Please turn to page* 170)



Safety switch *assembly close-up. Exposed, easily-inspected parts are a big feature, according to White-Rodgers enthusiasts. Servicemen can stop the burner and keep it idle by holding the re-set lever (that extends out the front of the cover) in its "off" position . . . can with the cover off trip the safety switch off to keep the burner "off on safety" until the re-set lever is used. An expert can insert a screwdriver in a hole in the back of the stack control to reach the adjustment screw that can be used to reduce the safety (try-for-ignition) timing below the standard 90 seconds. Seldom used, this feature is advantageous for certain installations, say some servicemen.*



Portable testing set-up *made by this White-Rodgers field engineer is simple and compact, can be used to put any make and model stack control panel through its paces. Has two switches, one in line-voltage circuit of 600-watt heater element at the right that simulates smokepipe heat, and one in room thermostat circuit. Unplugging the cord simulates current failure or opening of a live-line high limit control. One small light bulb represents the burner motor, the other represents the ignition system.*

New Products at the Boston Show

Part II—Highlights of Exhibition sponsored by Oil Heat Institute of New England

IN THE JULY ISSUE we brought you the first half of this appraisal of new products displayed at Boston. Here's the other half:

Silent-Flame Mfg. Co., Inc. announced its brand-new Silent-Flame hot-water circulator. Made in ¾" to 2¼" pipe sizes, its big feature is that it can be mounted horizontally, vertically, or at any in-between angle.

General Electric—Appliance Control Dept.—had exceptionally good layouts to teach technicalities of the new General Electric domestic oilburner controls, (1) a master control set-up including a stack-mounted unit with a bimetal smokepipe helix, and (2) a master control panel with a separate flame detector that can be located in the smokepipe or near the firebox.

Manville Boiler Co., Inc., announced its new R Series oil boiler, made in three sizes for .75, .85, and 1.0 gph. A built-in flue-control device is intended to eliminate pulsation caused by a poor chimney. Like all Manville boilers, this is described as having diagonal cross-duct flues, and having ¼" boilerplate construction throughout.

New for General Fittings Company were built-in tankless water heaters in a wide variety of designs and capacities to fit different boilers. Rated from 3 to 6 gpm, these have extruded copper fins wider and higher than General Fittings used before; these increase the rate of heat transfer.

Marietta Metal Products Co. displayed at Boston its new Magic-Heat round, vertical firetube boiler. For hot-water type heating systems only, this has a gross output of 70,000 Btu's per hour. Engineered for lowest-priced homes, the new boiler has a square jacket handsomely finished—body is gray and top is blue.

New in the line of Firomatic products on displayed at the show was an offset oil tank valve for 55 gallon drums and 110 and 275-gallon oil tanks; ⅜", ½", and ¾" sizes; with and without the fusible feature.

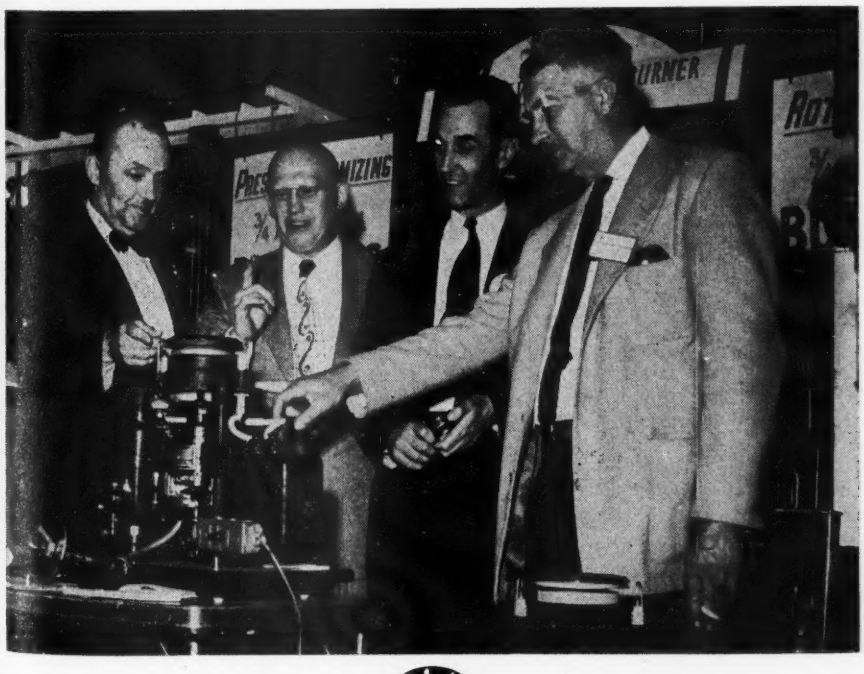
Fitzgibbons Boiler Co., Inc., had a big, new story to tell about its brand-new No. 770 boiler-burner unit. To start out, this comes complete with everything required for a forced hot-water heating system, said the Fitzgibbons enthusiasts. For small homes, the unit consists of a new Fitzgibbons steel boiler having a gross output of 115,500 Btu per hour—added to this are 17 pieces of equipment including a pressure oilburner, controls and heating specialties, for the most part factory-assembled. This boiler-burner unit is shipped in a protective carton ready for immediate hook-up. ASME construction and SBI rating are featured. The unit is wired in a clean-cut fashion; a tailor-made terminal block is used, for example. Quick start-ups for water heating are featured.

Fitzgibbons men explained at the show that the burner starts within 35 seconds when a hot water faucet is opened! This is the result of careful engineering of the tankless water heater and its location, and use of an excellent boiler temperature control.

Purolator's new Model PF-2002 filter was displayed. It is made in one size for domestic-type oilburners using up to 7,000 gallons a year. Its depressed-head design eliminates spilling oil when switching elements. Great area with resultant low resistance to flow result from using the PF-200 Micronic filtering element, which boasts all of 200 sq. in. of filtering area.

The Minneapolis-Honeywell men brought to the Boston show their new R485 push-button start type control panel, strictly for industrial oilburners and, it must be admitted, gas burners. This is flame-failure cut-off type; an electronic eye scans the flame. Also new at the show in the M-H extensive booths: 4010 and 4011 dual combination Aquastats—and Aquastat is a Minneapolis-Honeywell trade name—immersion, fast-acting type for line-voltage as well as low-voltage circuits. Also new: M-H T823 combination heating and cooling room thermostats for year-round airconditioning set-ups. New Minneapolis-Honeywell literature was distributed at the show to end the worries of dealers puzzled about how to control installations that provide automatic heating in winter and automatic cooling in summer.

The Heil Company announced at

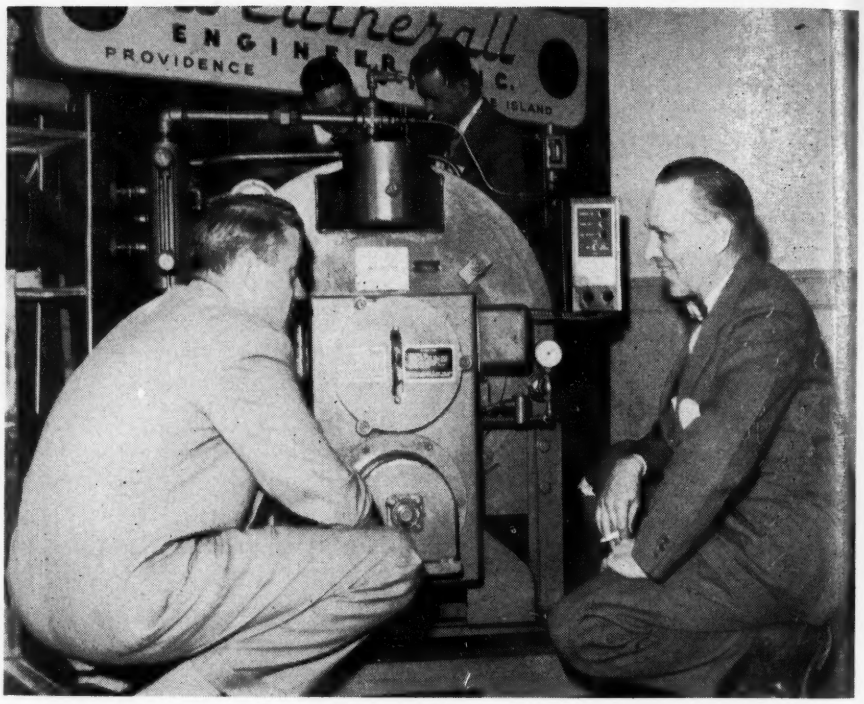


Boston that new in its line, to complete the series of Heil furnace-burner units, are horizontal oilfired furnaces, four sizes for from .75 to 2.0 gph.

Waltham Oil Burner Co. said at Boston that to round out its line it announced cast-iron boiler-burner units, five sizes for from .75 gph to 2.0 gph.

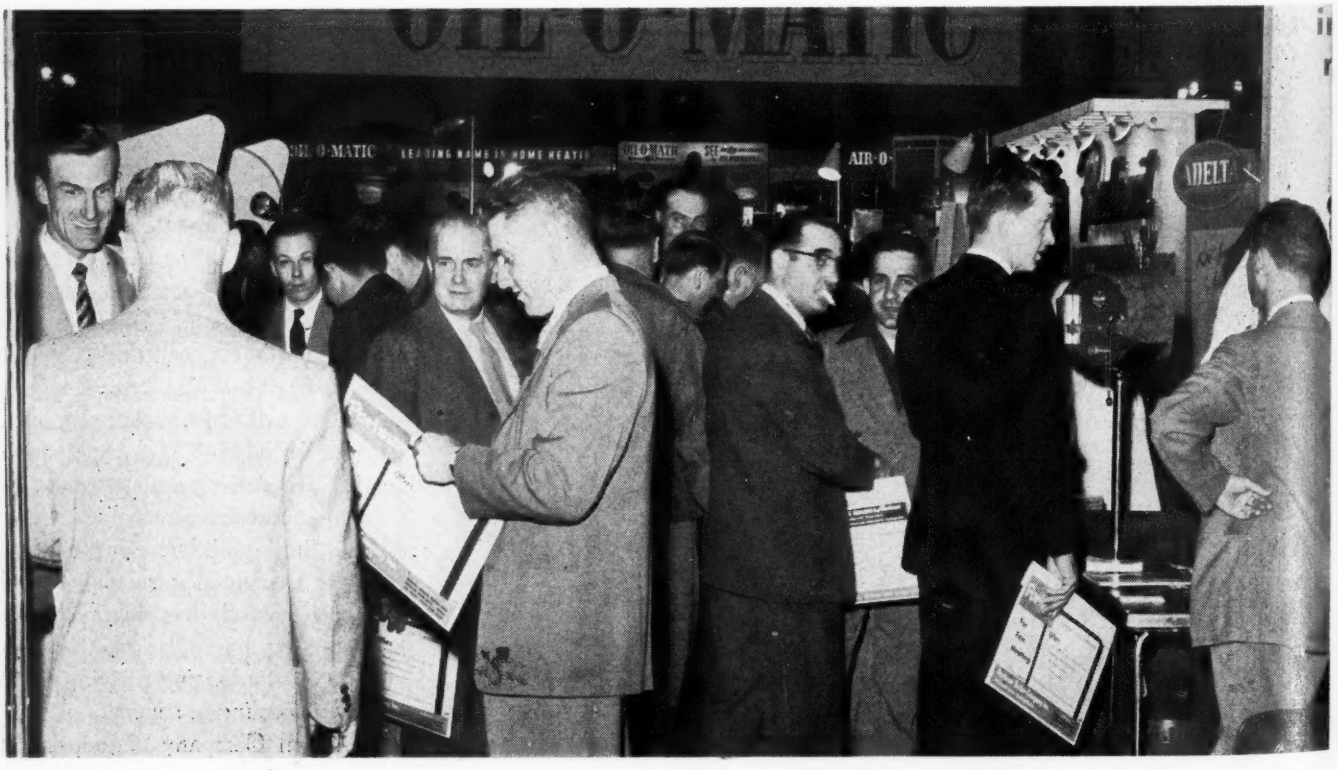
Windmaster Corp. can always be counted on to come to a show with something new! At Boston, it announced the E-Z'Dapter, designed to end all work of snipping at smokepipes to make openings for Windmaster draft regulators. A small size is simply a piece of metal that, rolled into shape and locked in a matter of seconds, forms a section of either 6" or 7" round smokepipe with a rectangular opening of the proper size and shape for a Windmaster regulator. A large size does the same thing, forming either a 8" or 9" smokepipe ready to take a Windmaster draft regulator. The opening in the smokepipe thus formed is flanged top and bottom, and the Windmaster is flanged at the sides, so the result is a rigid job of installing the smokepipe and draft regulator in a matter of minutes.

Thatcher Furnace Company featured its cooling unit for furnace-heated homes, announced that for homes and commercial buildings it offers cooling equipment in sizes of 2, 3, 5, 7½, and 10 tons.



International Heater Company proclaimed as new at Boston its Series C cast-iron boiler with flush jacket, for hot-water type heating systems only. Obtainable with or without an oilburner and with or without a built-in trombone water heating coil, this is made in three sizes for 1.0, 1.5, and 2.0 gph.

H. C. Little Burner Co., Inc., had in its booth at Boston a sign that gave out the news that it has the only vaporizing burner now listed by the Underwriters' Laboratories to burn No. 2 furnace oil (CS12-48 catalytic oils). The sign said precisely that, and clearly gave the booth much to be proud of. The outstanding performance of the new H. C. Little burner, a booth attendant was ready to explain, results from a new electric ignition assembly. A new jet air tube feeds combustion air directly to a coil, red-hot as the result of receiving secondary current from a three-volt, 100-watt ignition



transformer. Thanks to the invention of the air jet arrangement, the igniter coil now can be placed higher above the oil to be ignited than it was in earlier H. C. Little burners. This reduces deterioration of the coil due to chemical effects of the oil.

U. S. oilburners, made by the Carlin Co., had at Boston new additions to the line, Shell head pressure burners in large sizes. Model 800S-4 fires from 4.0 to 8.0 gph; Model 2000S-5 from 7.0 to 12 gph.

Char-Gale Mfg. Co. explained the features of its new Gale-Aire 4½" system: All fittings packaged, eliminating handling and warehousing costs; all fittings made of aluminum; all straight piping in ten-foot lengths; all stack fittings snap-on's, eliminating "S" and drive clips; 40% greater Btu delivery at registers over many other so-called small-pipe systems. Here's an interesting point: Char-Gale, in its interesting literature distributed at the show, recommends that the return duct area be at least five square inches per 1,000 Btu per hour.

The exhibit booths of the Boston show were so crammed with visitors that at times, trying to get information in a booth, this reporter decided to move on and leave space for those with profitable equipment-buying on their minds. Also at times, booth attendants were reluctant to give out official information and asked this reporter to call back later to interview a high-up official of the company . . . which was not feasible for the reporter in every instance. Again, in one or two instances, booth attendants were hard-pressed in one way or another and were not manning their booths every hour; booths were found to be unattended. If any product genuinely new at the Boston show is not mentioned in this write-up, such things—together with human frailty of the writer—are responsible. Any omission is inadvertent.

Prize winners *in the oilheating graduating classes of two New York City vocational high schools. Paragon Oil Co., Brooklyn, generously gave to the Petroleum Educational Foundation 250 E Bonds of $100 denomination to be passed on to outstanding students in the oilheating courses over the next several years. This year 25 of the bonds were awarded.*

The photo above shows in cap and gown the award winners at Samuel Gompers High School . . . from the left, Charles Brennan, Ronald Faso, Joseph Guarino, George Kachulis, Anthony Del Duca, Donald Olson, George Crespo, Robert Bartholemew, Albert Campisi, Herbert Prago, James McCabe, Aribert Scherle, Morris Friedman, Bernie Hengel and Louis Pandolfi. Seated are Armand Sbare, instructor, Robert B. Schwartz, Paragon vice-pres. who made the awards, Edward N. Wallen, principal, and John Kelly, instructor.

The lower photo shows, in cap and gown, these young men from the Thomas Edison High School: Laurence Bohn, Anthony D'Amodio, Charles Eberts, Edward Hagenbruch, Max Helfman, Clifton Hodge, Arthur Hulse, Anthony Marmo, Roger Matthews and Lawrence Stiedl. Standing in front are Schwartz, Jacob H. Raphael, principal, and L. T. White, Cities Service, and chairman, Petroleum Educational Foundation.

OHI Board of Directors Meets in New York City

THE QUARTERLY MEETING of the Board of Directors of the Oil Heat Institute of America was called to order by President Paul Addams at the Commodore Hotel in New York City on July 9th. About 50 members were in attendance.

At the meeting copies of the constitution incorporating the latest changes and amendments were distributed. Under the newer provisions board meetings will be reduced from 5 to 4 per year and the executive committee increased from 7 to 9 members. The new members added to the executive committee were George Wolf from the distribution division and M. J. Donahue from the manufacturer's division.

According to an organizational and operational printed report submitted by R. H. L. Becker, Secretary-Treasurer, membership in the Institute totals 146, with 45 being manufacturer members, 63 accessory members and 38 chapter representatives form the distribution division.

Report on Insurance Trust

Fred Beckwith, executive secretary of the OHI of New England, reported to the board on the Insurance Trust. In all 439 participating companies have taken out $10,409,500 on 1786 individuals. Of this total $1,370,000 has been taken out by 23 manufacturers. To date, Beckwith explained, there have been no dividends accrued due to claims that have totalled $122,000 since the insurance plan has been in force. It was his opinion that when the insurance trust reached coverage totalling $15,000,000 it would begin to show a profit. The board approved a motion to continue the plan another year.

The question of exhibiting gas fired equipment at the exposition to be held in Philadelphia in 1954 came up. A lively discussion ensued. A motion so worded as to allow the exhibition of the integral combination oil-gas burner but to exclude straight gas burning equipment was carried by a large ma-

(Continues on opposite page)

Weather Bureau adopts new degree-day Normals

EFFECTIVE JULY 1 the United States Weather Bureau is basing all of its degree-day considerations on a new set of normals for 288 weather reporting stations throughout the country. The old normals had been based on an average of 43 years from 1899 through 1941 and these had been pulled together pretty much to assist with fuel rationing during the war.

Now the weather experts find that the climate has been importantly shifting, usually warmer, and the new set of figures is based on a 30 year experience, 1921 through 1950. The tables that follow show these by months for all principal stations. Where the symbol AP appears after the name of a station it means airport temperatures. CO means city office. In your own calculations you can determine whether airport or central office temperatures more nearly represent your selling areas and be guided accordingly.

At FUELOIL & OIL HEAT we will continue to use airport figures where they are available, rather than central office, principally because central offices are inclined to be moderated in temperatures by the large buildings surrounding them.

All degree-days are based on 65° F.

Normal Monthly and Seasonal Degree Days

State and Station	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Season Total
ALABAMA													
Anniston AP	0	0	23	118	438	614	614	485	381	132	29	0	2834
Birmingham AP	0	0	24	123	396	598	623	491	378	132	30	0	2795
Mobile AP	0	0	0	32	219	376	416	304	228	47	0	0	1622
Mobile CO	0	0	0	23	203	358	412	290	216	40	0	0	1542
Montgomery AP	0	0	10	68	304	491	517	388	296	84	11	0	2169
Montgomery CO	0	0	8	55	267	457	483	360	272	66	10	0	1978
ARIZONA													
Flagstaff AP	52	78	243	586	876	1135	1231	1014	949	687	465	212	7528
Phoenix AP	0	0	0	27	223	400	474	309	201	74	15	0	1723
Phoenix CO	0	0	0	22	186	360	425	275	181	62	9	0	1520
Prescott AP	0	0	34	261	582	843	921	717	626	368	169	21	4542
Tucson AP	0	0	0	24	222	403	474	330	239	89	11	0	1792
Winslow AP	0	0	23	274	663	946	1001	706	605	335	144	16	4713
ARKANSAS													
Fort Smith AP	0	0	20	131	435	698	775	571	418	132	28	5	3213
Little Rock AP	0	0	20	110	405	654	719	543	402	126	22	0	3001
Texarkana AP	0	0	11	68	317	527	600	441	324	89	9	0	2386
CALIFORNIA													
Bakersfield AP	0	0	9	40	273	505	561	350	259	109	25	0	2131
Beaumont CO	0	0	22	103	298	487	574	473	437	286	146	21	2847
Bishop AP	0	10	55	253	564	803	840	664	546	319	139	38	4231
Blue Canyon AP	36	41	109	369	633	822	893	809	815	597	397	202	5723
Burbank AP	8	7	19	59	186	324	396	308	265	152	85	22	1831
Eureka CO	267	248	264	335	411	508	552	465	493	432	375	282	4632
Fresno AP	0	0	12	86	345	580	629	400	304	149	48	6	2559
Los Angeles AP	34	25	55	90	200	301	378	305	273	184	121	56	2022
Los Angeles CO	10	7	21	40	144	253	328	244	212	133	72	21	1485
Mount Shasta CO	37	46	165	434	705	939	998	787	722	549	357	174	5913
Oakland AP	86	78	78	157	336	508	552	400	360	282	212	119	3168
Red Bluff AP	0	0	0	59	319	564	617	423	336	181	51	5	2555
Sacramento AP	0	0	26	101	357	595	642	428	349	222	103	13	2836
Sacramento CO	0	0	20	78	321	567	614	403	318	196	90	14	2621
Sandberg CO	6	7	26	211	465	701	781	678	629	435	261	59	4259
San Diego AP	13	13	27	55	147	255	318	247	223	151	101	42	1592
San Francisco AP	144	136	101	174	318	487	530	398	378	327	264	164	3421
San Francisco CO	189	177	111	128	237	406	462	336	317	279	248	180	3070
San Jose City Coop. Stn.	9	13	26	97	270	450	487	342	308	229	141	46	2418
Santa Catalina AP	21	14	24	79	168	311	375	328	344	264	205	121	2254
Santa Maria AP	98	94	111	157	262	391	453	370	341	276	229	152	2934
COLORADO													
Alamosa AP	67	121	309	648	1065	1414	1491	1176	1029	699	440	203	8662
Colorado Springs AP	15	21	128	422	777	1039	1122	930	874	555	307	75	6265
Denver AP	12	19	125	425	771	1032	1125	924	843	525	286	64	6151
Denver CO	6	17	103	385	711	958	1042	854	797	492	266	60	5691
Grand Junction AP	0	0	36	333	792	1132	1271	924	738	402	150	27	5805
Pueblo AP	0	11	78	383	771	1051	1104	865	775	456	203	31	5728
CONNECTICUT													
Bridgeport AP	0	13	70	333	645	1014	1110	1008	871	561	249	38	5912
Hartford AP	0	17	104	384	699	1082	1178	1050	871	528	200	34	6147
New Haven AP	5	22	93	363	663	1026	1113	1005	865	567	261	52	6035
DELAWARE													
Wilmington AP	0	6	47	282	585	927	983	876	698	396	114	13	4927

Normal Monthly and Seasonal Degree Days

State and Station	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Season Total
D. C.													
Washington AP	0	8	37	237	519	837	893	781	619	323	91	12	4357
Washington CO	0	7	37	230	510	831	884	770	606	314	80	8	4277
FLORIDA													
Apalachicola CO	0	0	0	21	154	304	351	263	184	33	0	0	1310
Daytona Beach AP	0	0	0	5	82	212	245	193	137	14	0	0	888
Fort Meyers AP	0	0	0	0	25	101	130	95	60	6	0	0	417
Jacksonville AP	0	0	0	20	148	309	331	254	176	23	0	0	1261
Jacksonville CO	0	0	0	19	129	276	304	226	155	17	0	0	1126
Key West AP	0	0	0	0	6	27	34	25	13	0	0	0	105
Key West CO	0	0	0	0	5	22	33	29	15	0	0	0	104
Lakeland CO	0	0	0	7	60	167	192	142	95	8	0	0	671
Orlando AP	0	0	0	0	61	167	188	148	92	8	0	0	664
Pensacola CO	0	0	0	22	182	334	383	275	203	45	7	0	1451
Tallahassee AP	0	0	0	35	209	366	385	287	203	38	0	0	1523
Tampa AP	0	0	0	0	60	170	201	148	102	12	0	0	693
West Palm Beach AP	0	0	0	0	14	62	85	61	38	0	0	0	260
GEORGIA													
Albany AP	0	0	0	39	242	426	446	334	236	40	0	0	1763
Athens AP	0	0	14	100	390	614	638	515	404	132	19	0	2826
Atlanta AP	0	0	19	114	393	614	641	512	404	133	23	0	2853
Atlanta CO	0	0	18	111	387	611	641	515	392	135	28	0	2838
Augusta AP	0	0	8	59	282	493	522	412	308	62	8	0	2154
Columbus AP	0	0	10	78	326	546	563	437	348	101	15	0	2424
Macon AP	0	0	11	63	280	481	497	391	283	62	9	0	2077
Rome AP	0	0	18	145	435	673	700	560	436	163	31	0	3161
Savannah AP	0	0	0	38	225	412	424	329	238	43	0	0	1709
Valdosta AP	0	0	0	32	203	366	386	290	217	38	0	0	1532
IDAHO													
Boise AP	0	5	140	389	762	1054	1169	868	719	453	249	92	5900
Lewiston AP	0	8	133	406	747	961	1060	815	663	408	228	67	5496
Pocatello AP	7	10	183	487	873	1184	1333	1022	880	561	317	141	6998
ILLINOIS													
Cairo CO	0	0	34	167	492	784	856	683	523	182	47	11	3779
Chicago AP	8	15	90	350	765	1147	1243	1053	868	507	230	58	6334
Moline AP	11	18	102	363	786	1181	1296	1075	862	453	199	45	6391
Peoria AP	9	20	86	338	759	1128	1240	1028	828	435	192	46	6109
Springfield AP	9	21	83	315	723	1066	1166	958	769	404	172	32	5718
Springfield CO	6	9	56	266	666	1017	1116	907	713	350	134	20	5260
INDIANA													
Evansville AP	11	9	59	215	570	871	939	770	589	251	90	16	4390
Fort Wayne AP	13	22	112	377	759	1122	1200	1036	874	516	226	54	6311
Indianapolis AP	17	13	79	306	705	1051	1122	938	772	432	176	36	5647
Indianapolis CO	8	8	58	247	642	986	1051	893	725	375	140	27	5160
South Bend AP	13	21	101	381	789	1153	1252	1081	908	531	248	62	6540
Terre Haute AP	8	15	77	295	681	1023	1107	913	725	371	151	30	5396
IOWA													
Burlington AP	7	19	83	336	765	1150	1271	1036	822	425	179	39	6132
Charles City CO	22	30	151	444	912	1352	1494	1240	1001	537	264	70	7517
Davenport CO	9	17	79	320	756	1147	1262	1044	834	432	175	41	6116
Des Moines AP	15	22	99	354	798	1203	1330	1092	868	438	201	45	6465
Des Moines CO	13	21	89	346	777	1178	1308	1072	849	425	190	41	6309
Dubuque AP	18	28	149	443	882	1290	1414	1187	983	543	267	76	7280
Sioux City AP	25	22	127	406	885	1290	1423	1170	930	474	236	54	7042
KANSAS													
Concordia CO	10	16	55	284	687	1029	1144	899	725	341	146	26	5362
Dodge City AP	0	12	40	262	669	980	1076	840	694	347	134	20	5074
Goodland AP	16	18	95	413	825	1128	1215	974	884	534	242	58	6402
Topeka AP	12	20	59	278	672	1017	1125	885	694	326	137	27	5252
Topeka CO	9	9	48	249	630	977	1088	851	669	295	117	24	4966
Wichita AP	5	13	38	227	597	915	1023	778	619	280	101	17	4613
KENTUCKY													
Lexington AP	9	11	57	259	636	933	1008	854	710	368	139	24	5008
Louisville AP	0	10	51	232	579	871	933	778	611	285	99	19	4468
Louisville CO	5	8	47	205	549	849	911	762	605	270	86	13	4310
LOUISIANA													
Baton Rouge AP	0	0	0	27	215	373	424	294	222	48	0	0	1603
Lake Charles AP	0	0	0	26	218	353	416	284	210	40	0	0	1547
New Orleans AP	0	0	0	14	174	308	364	248	190	31	0	0	1329
New Orleans CO	0	0	0	13	141	283	341	229	163	22	0	0	1192
Shreveport AP	0	0	5	53	305	490	550	385	279	61	6	0	2134
MAINE													
Caribou AP	85	133	354	710	1074	1562	1745	1546	1342	909	512	201	10173
Eastport CO	141	136	261	521	798	1206	1333	1201	1063	774	524	288	8246
Portland AP	17	56	199	515	825	1237	1373	1218	1039	693	394	117	7683
MARYLAND													
Baltimore AP	0	8	43	256	558	884	942	820	651	360	97	9	4628
Baltimore CO	0	0	33	207	489	812	880	776	611	325	78	7	4218
Frederick AP	0	6	47	276	588	930	1001	865	673	368	106	14	4874
MASSACHUSETTS													
Boston AP	0	15	77	315	618	998	1113	1002	849	534	236	42	5799
Nantucket AP	22	34	114	372	615	924	1020	949	880	642	394	139	6105
Pittsfield AP	25	63	213	543	843	1246	1358	1212	1060	690	336	109	7698
MICHIGAN													
Alpena CO	50	85	214	530	864	1218	1358	1263	1156	762	437	135	8072
Detroit Willow Run AP	6	14	96	393	759	1125	1231	1089	915	552	244	55	6479

jority with only three members of the board voting against it. Thus the 1954 exposition will see no straight gas burning equipment displayed.

Reports were made by members of the Education committee and the board voted its approval of a short course in the Commercial-Industrial Burner field to be held at Lehigh University in Bethlehem, Pennsylvania, on June 15th, 16th and 17th, 1954. The course which will last 2½ days will be jointly sponsored by OHI and Lehigh University.

W. Quimby, chairman of the Technical division reviewed the progress of the three projects being sponsored by that group.

New members Admitted

New members admitted to OHI at this meeting, by action of the Board, were the Magnex Corporation, to the Accessory Division and the following as associate members of the Distribution Division:

Griffin Fuel Supply, Savannah, Georgia, Comer & Son, Richmond, Indiana, Crystal Flash Petroleum Corporation, Grand Rapids, Moore Oil Company, Burlington, North Carolina.

Cagney & Byk, Briand & Ulmland, George Miller Company, Home Fuel Company, Wellers Oil, Coast Petroleum, Casey Coal, George Wendel, and Dodge City Oil, all of New Jersey.

Charles De Temple Inc., Piping Rock Petroleum Company, Automatic Heat & Fuel Company and George Hamilton, Inc., all of New York.

Automatic Heating and Appliance Company, Scranton, General Oils, Chattanooga, and J. B. Cassidy, Liquidfuels, Ltd. and R. Robillard Ltd. of Canada.

New chapters admitted to the Distribution Division were the Oil Heat Association of Metropolitan Philadelphia, the South Shore Fuel Oil Dealers Association of Patchogue, Long Island and the Fuel Oil Dealers of British Columbia, Vancouver.

The "Treasury of Advertising" has sold 102,381 pieces of literature to date. In addition the Distribution Di-

vision has sold 35,879 calendars and 3300 truck driver manuals.

A resolution was passed by the Board extending the sympathy of the Institute to the Addams family on the death of Homer Addams, Chairman of the Board, Fitzgibbons Boiler Co., Inc.

Seneca Spring said to mark first Oil found in America

THE SENECA OIL SPRING, located on a wooded area just outside Cuba, N. Y., is reputed to be the first oil found in America. Shown in a close-up in the photograph, the spring was discovered 326 years ago and was used by the Indians as a source of medicine.

A commemorative tablet, erected as a terticentenary memorial on July 23, 1924 by the University of the State of New York and the New York State Oil Producers Association, contains these highlights:

"1627—Joseph De La Roche D'Allion, a Franciscan Friar, first recorded oil on this continent.

"1767—Oil from this spring sent to Sir William Johnson as a cure for his wounds.

"1797 — Spring permanently reserved by Indians in Treaty of Big Tree.

"1833—Description of spring by Prof. Benjamin Silliman of Yale.

(Continues on opposite page)

Normal Monthly and Seasonal Degree Days

State and Station	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Season Total
MICHIGAN (Con't)													
Detroit City AP	8	15	96	381	747	1101	1203	1072	927	558	251	60	6419
Escanaba CO	62	95	247	555	933	1321	1473	1327	1203	804	471	166	8657
Grand Rapids AP	22	34	144	462	822	1169	1287	1154	1008	606	301	79	7088
Grand Rapids CO	11	24	105	394	756	1107	1215	1086	939	546	254	58	6495
Lansing AP	21	33	140	456	813	1175	1277	1142	986	591	287	70	6991
Marquette CO	69	92	236	543	933	1299	1435	1291	1181	789	477	189	8534
Muskegon AP	30	48	157	462	795	1110	1243	1134	1011	642	350	116	7098
Sault Ste. Marie AP	109	126	298	639	1005	1398	1587	1442	1302	846	499	224	9475
MINNESOTA													
Duluth AP	66	103	316	667	1155	1618	1773	1529	1339	849	493	192	10100
Duluth CO	66	91	277	614	1092	1550	1696	1448	1252	801	487	200	9574
International Falls AP	70	122	356	716	1230	1733	1922	1618	1395	834	437	171	10604
Minneapolis AP	18	22	157	460	960	1414	1562	1310	1057	570	260	80	7870
Rochester AP	30	42	182	499	975	1426	1572	1316	1073	600	298	92	8105
Saint Cloud AP	37	53	225	570	1068	1535	1690	1439	1181	663	331	112	8904
Saint Paul AP	22	25	154	460	951	1401	1553	1305	1051	564	264	77	7827
MISSISSIPPI													
Jackson AP	0	0	8	69	310	503	535	405	306	81	10	0	2227
Meridian AP	0	0	13	95	338	528	561	413	309	85	16	0	2358
Vicksburg CO	0	0	8	51	268	456	507	374	273	70	8	0	2015
MISSOURI													
Columbia AP	17	17	62	269	654	989	1091	876	697	326	135	24	5157
Kansas City AP	12	12	44	240	621	970	1085	851	666	292	111	24	4928
Saint Joseph AP	10	16	49	272	681	1048	1175	930	716	326	134	20	5377
Saint Louis AP	7	12	51	233	600	927	1017	820	648	297	107	22	4741
Saint Louis CO	6	9	38	209	570	893	983	792	620	270	94	23	4507
Springfield AP	9	19	61	249	615	908	1001	790	632	295	118	20	4717
MONTANA													
Billings AP	18	25	193	497	876	1172	1305	1089	958	564	305	119	7121
Butte AP	115	174	450	744	1104	1442	1575	1294	1172	804	561	325	9760
Glasgow CO	19	30	244	574	1086	1510	1683	1408	1119	597	312	113	8695
Great Falls AP	28	50	273	524	894	1194	1329	1131	1008	621	359	166	7577
Havre CO	25	38	270	564	1023	1383	1513	1291	1076	597	313	130	8223
Helena AP	36	66	320	617	999	1311	1469	1165	1017	654	399	197	8250
Kalispell AP	47	83	326	639	990	1249	1386	1120	970	639	391	214	8054
Missoula AP	22	57	292	623	993	1283	1414	1100	939	609	364	181	7877
NEBRASKA													
Grand Island AP	13	17	84	369	822	1178	1302	1044	849	423	202	39	6342
Lincoln AP	16	17	82	340	774	1144	1271	1030	822	401	190	44	6131
Lincoln CO	12	18	79	310	741	1113	1240	1000	794	377	172	38	5894
Norfolk AP	21	22	121	422	903	1280	1417	1159	933	501	259	60	7098
North Platte AP	17	20	120	425	846	1172	1271	1016	887	489	243	59	6565
Omaha AP	16	22	88	331	783	1166	1302	1058	831	389	175	38	6199
Scottsbluff AP	12	14	141	456	867	1178	1287	1030	933	567	305	81	6871
Valentine CO	22	20	150	461	891	1212	1361	1100	970	543	288	83	7101
NEVADA													
Elko AP	12	28	229	546	915	1181	1336	1025	896	612	378	188	7346
Ely AP	22	44	228	561	894	1181	1302	1033	921	639	418	205	7448
Las Vegas AP	0	0	0	61	344	564	654	423	288	92	13	0	2444
Reno AP	27	61	165	443	744	986	1048	804	756	519	318	165	6036
Winnemucca AP	0	21	184	508	822	1085	1153	854	794	546	299	111	6377
NEW HAMPSHIRE													
Concord AP	14	57	192	527	849	1271	1392	1226	1029	660	316	82	7615
NEW JERSEY													
Atlantic City CO	0	7	29	230	507	831	905	829	729	468	189	24	4748
Newark AP	0	10	47	301	603	961	1039	932	760	450	147	18	5268
NEW MEXICO													
Albuquerque AP	0	0	13	218	630	899	970	714	589	289	74	0	4396
Clayton AP	8	10	67	318	678	927	995	795	729	420	184	28	5159
Raton AP	18	36	148	431	798	1104	1203	924	834	543	292	87	6418
Roswell AP	0	0	15	160	501	750	787	566	443	185	32	0	3439
NEW YORK													
Albany AP	10	24	139	443	780	1197	1318	1179	989	597	246	50	6972
Albany CO	7	14	98	388	708	1113	1234	1103	905	531	202	35	6338
Bear Mountain CO	5	25	118	409	753	1110	1212	1098	921	561	244	59	6515
Binghamton AP	19	63	197	518	834	1228	1342	1215	1051	672	318	88	7545
Binghamton CO	10	36	141	428	735	1113	1218	1100	927	570	240	48	6566
Buffalo AP	20	30	121	433	753	1116	1225	1128	992	636	315	72	6841
N. Y. La Guardia AP	0	6	32	249	546	908	992	907	760	447	145	13	5005
New York CO	0	10	39	263	561	908	995	904	753	456	157	22	5068
N. Y. Central Park Obs.	0	9	31	249	552	902	1001	910	747	435	130	14	4980
Oswego CO	24	39	139	430	738	1132	1249	1134	995	654	355	90	6979
Rochester AP	17	39	137	440	759	1141	1249	1148	992	615	289	54	6880
Schenectady CO Coop.	7	23	137	456	792	1212	1349	1207	1008	597	233	40	7061
Syracuse AP	10	33	117	396	714	1113	1225	1117	955	570	247	37	6534
NORTH CAROLINA													
Asheville CO	0	5	51	262	552	769	794	678	572	285	105	11	4084
Charlotte AP	0	0	16	147	438	682	704	577	449	172	29	0	3214
Greensboro AP	0	0	34	203	510	772	806	672	528	241	50	0	3816
Hatteras CO	0	0	0	63	244	481	544	487	394	171	25	0	2409
Raleigh AP	0	0	20	153	438	701	732	613	477	202	41	0	3377
Raleigh CO	0	0	19	118	387	651	691	577	440	172	29	0	3084
Wilmington AP	0	0	6	78	288	508	550	463	347	106	12	0	2358
Winston-Salem AP	0	0	33	182	492	756	797	666	519	232	49	0	3726
NORTH DAKOTA													
Bismarck AP	34	32	227	598	1098	1535	1730	1464	1187	657	355	122	9039
Devils Lake CO	47	61	276	654	1197	1668	1866	1576	1314	750	394	142	9945

Normal Monthly and Seasonal Degree Days

State and Station	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Season Total
NORTH DAKOTA (Con't)													
Fargo AP	30	41	215	586	1122	1615	1795	1518	1231	687	338	106	9284
Williston CO	35	42	261	605	1101	1528	1705	1442	1194	663	360	144	9080
OHIO													
Akron-Canton AP	10	21	83	378	738	1082	1166	1033	884	537	235	50	6217
Cincinnati AP	15	14	77	296	648	973	1029	871	732	392	149	28	5224
Cincinnati CO	0	9	48	222	567	880	942	812	645	314	108	19	4566
Cincinnati Abbe Obs.	8	7	57	263	612	930	989	846	682	347	132	22	4895
Cleveland AP	6	18	75	340	699	1057	1132	1019	874	531	223	45	6019
Cleveland CO	6	17	60	311	636	995	1101	977	846	510	223	44	5726
Columbus AP	6	17	69	337	693	1032	1094	946	781	444	185	36	5640
Columbus CO	7	12	59	299	654	983	1051	907	741	408	159	27	5307
Dayton AP	13	18	74	324	693	1032	1094	941	781	435	179	39	5623
Sandusky CO	6	15	66	327	684	1039	1122	997	853	513	222	41	5885
Toledo AP	11	20	102	387	756	1119	1197	1056	905	555	245	60	6413
Youngstown AP	10	23	87	355	732	1085	1163	1030	877	534	241	53	6190
OKLAHOMA													
Oklahoma City AP	0	0	19	154	480	769	865	650	490	182	40	0	3649
Oklahoma City CO	0	7	22	149	459	747	843	630	472	174	38	0	3541
Tulsa AP	0	6	29	152	462	750	856	644	485	173	44	10	3611
OREGON													
Baker CO	25	47	255	518	852	1138	1268	972	837	591	384	199	7086
Burns CO	16	37	219	552	855	1156	1274	946	809	552	349	163	6928
Eugene AP	33	34	144	381	591	756	831	624	567	423	270	125	4779
Meacham AP	88	105	294	605	903	1113	1243	1008	961	717	527	327	7891
Medford AP	9	5	77	326	624	822	862	627	552	381	207	69	4561
Pendleton AP	0	7	109	353	717	921	1066	795	614	386	203	51	5222
Portland AP	25	24	116	319	585	750	856	658	570	396	242	96	4637
Portland CO	16	16	85	280	534	701	791	594	515	347	199	70	4148
Roseburg CO	17	12	98	288	531	694	744	563	508	366	223	86	4130
Salem AP	21	23	113	326	588	744	825	622	564	408	249	94	4577
Sexton Summit	88	69	169	456	714	877	905	801	797	621	450	270	6217
Troutdale AP	33	31	131	335	591	766	874	664	574	405	256	115	4775
PENNSYLVANIA													
Allentown AP	0	17	93	366	690	1051	1132	1019	840	495	168	28	5899
Erie CO	10	21	76	352	672	1020	1128	1039	911	573	273	55	6130
Harrisburg AP	0	10	69	308	630	964	1051	921	750	423	128	18	5272
Park Place CO	17	57	178	484	807	1200	1277	1142	998	648	290	85	7183
Philadelphia AP	0	7	47	269	573	902	986	879	704	402	108	15	4892
Philadelphia CO	0	6	33	219	516	856	933	837	667	369	97	11	4544
Pittsburgh Allegh'y AP	5	14	78	336	678	1004	1073	955	784	447	167	31	5572
Pittsb'h Grtr. Pitt. AP	10	24	94	377	720	1057	1116	986	818	486	195	36	5919
Pittsburgh CO	0	11	56	298	612	924	992	879	735	402	137	21	5067
Reading CO	0	13	57	285	588	936	1017	902	725	411	123	15	5072
Scranton CO	5	22	115	389	693	1057	1141	1028	859	516	196	39	6060
Williamsport AP	7	20	106	377	699	1057	1132	1005	828	477	181	25	5914
RHODE ISLAND													
Block Island AP	11	24	88	330	591	927	1026	955	865	603	335	99	5854
Providence AP	13	26	107	381	672	1035	1125	1019	874	570	258	58	6138
Providence CO	7	15	72	330	624	986	1076	972	809	507	197	31	5626
SOUTH CAROLINA													
Charleston AP	0	0	0	52	270	456	472	379	281	63	9	0	1982
Charleston CO	0	0	0	34	214	410	445	363	260	42	0	0	1768
Columbia AP	0	0	8	82	338	558	566	468	340	83	10	0	2453
Columbia CO	0	0	8	76	308	524	538	443	318	77	10	0	2302
Florence AP	0	0	8	94	346	574	588	487	334	86	10	0	2527
Greenville AP	0	0	19	131	411	648	673	552	442	161	32	0	3069
Spartanburg AP	0	0	16	136	414	654	670	549	436	152	30	0	3057
SOUTH DAKOTA													
Huron AP	22	25	155	472	975	1407	1597	1327	1032	558	279	80	7929
Rapid City AP	38	28	193	500	891	1218	1361	1151	1045	615	356	148	7544
Sioux Falls AP	22	26	161	472	984	1414	1575	1274	1023	558	276	80	7865
TENNESSEE													
Bristol AP	0	6	58	239	576	815	818	697	576	274	95	9	4163
Chattanooga AP	0	0	30	174	477	710	725	588	468	179	45	5	3401
Knoxville AP	0	0	33	184	498	744	760	630	500	196	50	0	3595
Memphis AP	0	0	23	126	432	673	725	574	427	139	24	0	3143
Memphis CO	0	0	24	104	392	639	716	574	423	131	24	0	3027
Nashville AP	0	0	28	154	471	725	778	636	498	186	43	6	3525
TEXAS													
Abilene AP	0	0	15	98	350	595	673	479	344	113	13	0	2680
Amarillo AP	0	7	41	246	594	859	921	711	586	298	99	10	4372
Austin AP	0	0	0	30	220	402	484	322	211	51	5	0	1725
Big Springs AP	0	0	10	75	316	577	639	454	314	105	9	0	2499
Brownsville AP	0	0	0	0	59	165	219	106	74	11	0	0	634
Corpus Christi AP	0	0	0	9	119	252	330	197	124	13	0	0	1044
Dallas AP	0	0	6	53	299	518	607	432	288	75	6	0	2284
Del Rio AP	0	0	0	32	193	371	420	235	153	26	0	0	1430
El Paso AP	0	0	0	74	390	626	670	445	330	110	10	0	2655
Fort Worth AP	0	0	0	58	299	533	622	446	308	90	12	0	2368
Galveston AP	0	0	0	12	132	286	362	249	182	28	0	0	1251
Galveston CO	0	0	0	11	131	271	363	247	182	30	0	0	1235
Houston AP	0	0	0	14	186	321	394	265	191	36	0	0	1407
Houston CO	0	0	0	11	168	303	378	246	173	27	0	0	1306
Laredo AP	0	0	0	7	91	215	277	134	71	9	0	0	804
Lubbock AP	0	0	27	179	492	756	812	613	481	201	36	5	3602
Palestine CO	0	0	5	45	260	440	531	368	272	70	8	0	1999
Port Arthur AP	0	0	0	24	218	349	406	275	211	39	0	0	1522

Today an iron fence surrounds the spring, which is roughly 15 ft. across, with a large wooden cask submerged in it. The water is oily, but the spring no longer flows, or at least no movement can be detected on the surface.

Shipments of residential Oilburners up, reports OHI

AN EXCEPTIONALLY high June upsurge of shipments of residential oilburners to dealers and distributors has been noted in a preliminary check of manufacturers' monthly reports to the Oil-Heat Institute of America, Inc. R. H. L. Becker, managing director, reports that these shipments for June are estimated at 71,472, 12% up from the 63,816 conversion oilburners, oilfired furnace and burner units shipped during May.

The Institute's Market Research Department disclosed that shipments lagged in the first few months of the year because of heavy dealer-distributor stocks. First six months' total, however, shows an increase of 9% over 1952 shipments.

Shipments for the first half of last year were 317,377; for the first half of this year shipments are estimated at 345,913. "The industry pattern," states Becker, "has been that 56.5% of the year's shipments are made in the first six months, with the peak in October. If this pattern holds true this year, shipments will approximate 795,202 oilburners, furnace and boiler-burner units, an increase of 6.8% over 1952."

List oilburner Courses by Essex County Adult School

THE ESSEX COUNTY Vocational and Technical High School, which last year instructed 209 students in oilburner installation, service and sales courses, is beginning its registration for the fall season, September 30 and October 1.

The school, which operates with the cooperation of the Fuel Oil Distributors Association of New Jersey, is open to any resident of Essex County, or person working in Essex County, 16 years of age or older, who is employed

or has been recently regularly employed during the day in the oilburner field or in a related occupation. Persons residing and working outside of Essex County will be admitted upon the payment of the tuition fee but will be accepted only after all applicants residing or working in Essex County have been cared for.

For those persons residing or working in Essex County, there is no tuition charge as the school is supported by taxation.

Courses offered include:

Basic practices, 20 sessions (60 hours), Domestic oilburner installation, 30 sessions (90 hours), Domestic oilburner service, 40 sessions (120 hours), Advanced electrical practices, 20 sessions (60 hours), Commercial and industrial boiler installation, 20 sessions (60 hours), Commercial and industrial boiler installation (advanced), 20 sessions (60 hours), Oilburner fundamentals for salesmen, 10 sessions (20 hours), Oilburner installation and service problems for salesmen, 10 sessions (20 hours).

Registration will take place at the Essex County Adult Technical School, 294 Norfolk St., Newark, 7:30 to 9:30 p.m.

Normal Monthly and Seasonal Degree Days

State and Station	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Season Total
TEXAS (Con't)													
Port Arthur CO	0	0	0	16	176	315	381	258	188	31	0	0	1365
San Angelo AP	0	0	10	72	280	502	556	378	257	61	9	0	2125
San Antonio AP	0	0	0	30	201	374	462	293	190	38	0	0	1588
Victoria AP	0	0	0	11	131	277	351	215	143	17	0	0	1145
Wichita Falls AP	0	0	15	115	404	657	756	538	394	140	20	0	3039
Waco AP	0	0	5	44	251	459	557	385	263	66	6	0	2036
UTAH													
Milford AP	0	9	114	462	828	1147	1277	955	800	516	269	77	6454
Salt Lake City AP	7	0	88	381	771	1039	1194	885	741	453	239	81	5879
Salt Lake City CO	5	0	61	330	714	995	1119	857	701	414	208	64	5468
VERMONT													
Burlington AP	23	47	172	521	858	1308	1460	1313	1107	681	307	72	7869
VIRGINIA													
Cape Henry CO	0	0	9	124	366	648	698	636	512	267	60	7	3327
Lynchburg AP	0	8	49	236	531	809	846	722	584	289	86	12	4172
Norfolk AP	0	0	17	157	408	688	729	644	500	264	59	5	3471
Norfolk CO	0	0	13	118	354	636	679	602	464	220	41	0	3127
Richmond AP	0	0	38	209	498	791	828	708	550	271	66	7	3966
Richmond CO	0	0	31	181	456	750	787	675	529	254	57	6	3726
Roanoke AP	0	9	50	234	543	806	840	722	588	289	85	11	4177
WASHINGTON													
Ellensburg AP	16	20	176	496	849	1116	1268	949	753	504	296	105	6548
Kelso AP	88	87	186	409	636	784	856	652	605	453	316	173	5245
North Head L.H. Resvn	239	205	234	341	486	636	704	585	598	492	406	285	5211
Olympia AP	92	83	207	434	645	794	868	700	660	498	338	183	5502
Port Angeles AP	233	226	303	459	603	719	772	652	645	519	422	297	5850
Seattle CO	49	45	134	329	540	679	753	602	558	396	246	107	4438
Seattle Tacoma AP	75	72	192	412	633	781	862	675	636	477	307	155	5277
Spokane AP	21	28	210	508	879	1113	1243	988	834	561	330	146	6861
Stampede Pass	251	260	414	701	1002	1203	1280	1064	1063	837	636	438	9149
Tacoma CO	66	65	177	375	579	719	797	636	595	435	282	143	4869
Tattosh Island CO	295	288	315	406	528	648	713	610	629	525	437	330	5724
Walla Walla CO	0	0	98	308	675	890	1023	748	564	338	171	38	4853
Yakima AP	10	12	150	446	807	1066	1181	862	660	408	205	53	5860
Omak	14	46	195	533	921	1212	1352	1061	781	453	222	62	6852
WEST VIRGINIA													
Charleston AP	7	11	60	250	576	834	887	750	632	310	110	16	4443
Elkins AP	16	31	127	412	726	995	1017	910	797	477	224	53	5785
Huntington CO	0	7	40	210	549	803	837	728	570	251	85	13	4093
Parkersburg CO	10	11	56	272	600	896	949	826	672	347	119	18	4776
Petersburg CO	0	12	72	308	654	942	967	820	666	384	133	17	4975
WISCONSIN													
Green Bay AP	32	58	183	515	945	1392	1516	1336	1132	696	347	112	8264
La Crosse AP	21	25	152	447	921	1380	1528	1280	1035	552	250	74	7665
Madison AP	18	36	150	459	891	1302	1423	1207	1008	579	272	82	7427
Madison CO	19	30	137	419	864	1287	1417	1207	1011	573	266	79	7309
Milwaukee AP	25	32	134	428	831	1218	1336	1142	983	621	351	109	7210
Milwaukee CO	16	28	112	397	795	1184	1302	1117	961	606	335	105	6958
WYOMING													
Casper AP	21	24	231	577	951	1225	1324	1095	1011	660	381	151	7651
Cheyenne AP	37	39	241	577	897	1125	1225	1044	1029	717	462	178	7571
Lander AP	13	26	244	632	1050	1383	1494	1179	1045	687	396	163	8312
Rock Springs AP	23	32	266	648	1038	1349	1457	1182	1110	735	443	198	8481
Sheridan AP	31	45	239	578	957	1271	1392	1170	1035	645	387	166	7916

Canadian Decennial Housing And Fuel Survey Released

THERE WERE 774,535 centrally-heated dwelling units burning oil in Canada at the time of the 10-year Census taken in June 1951, compared with only 66,716 in the same month of 1941. This has just been disclosed, along with considerable other housing data, by the Dominion Bureau of Statistics, Ottawa, Ontario. Anyone needing a full copy of the report, which breaks the whole study into counties within the provinces, can get one by sending 50¢ (not stamps obviously) to the bureau.

The report lists 163,165 centrally-heated dwelling units heated by gas in 1951 compared with 87,443 in 1941. Thus fueloil has shown the much greater gain.

The total dominion in June 1951 had 3,409,295 dwelling units of which 1,637,685 were centrally heated and 1,771,610 were stove heated. The table shows, by provinces, central heating divided into boiler and warm air types and the comparative percentages of principal fuels.

Canadian Heating Survey, Residential, June 1951

	—CENTRAL HEATING—		—FUELS USED, %—		
	Boilers	*Warm Air*	*Oil*	*Gas*	*Other*
Newfoundland	3,160	1,790	10	0	90
P. E. I.	3,085	3,575	11	0	89
Nova Scotia	24,180	32,785	17	0	83
New Brunswick	8,170	27,580	15	0	85
Quebec	160,970	98,965	33	1	66
Ontario	239,985	49,980	25	4	71
Manitoba	28,015	86,495	9	0	81
Saskatchewan	14,790	70,160	17	1	82
Alberta	12,655	102,110	5	44	51
British Columbia	34,445	137,130	22	1	77
Total	529,465	1,052,570	23	5	72

H. M. Soyser, regional manager, Toridheet Div., Cleveland Steel Products Corp., Cleveland 2, Ohio, died suddenly July 2 at his home in Albion, Mich. Soyser was associated with the oilheating industry since the early 1920's. Prior to joining Toridheet, he was with Timken-Silent Automatic. His earliest connection with oilheating dated back to the old Silent Automatic.

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WHAT MORE COULD YOU ASK FOR THAN THIS?

- A complete line of industrial, commercial and residential oil burners
- Residential oil furnaces and boilers
- Compact units easily installed
- Highly salable equipment, with a famous name

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Petro has been building oil burners for over 50 years. The Petro line of oil firing equipment is outstanding. The Petro name is known and respected wherever oil burners and oil equipment is used. Petro dependability is traditional. The product has public acceptance.

Petro units are efficient fuel savers. They are simple and dependable in operation, require a minimum amount of service, and are a profitable line to sell.

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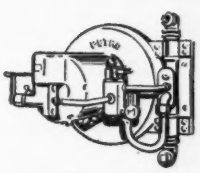
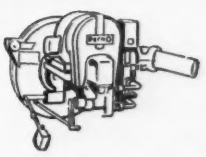


Industrial Oil Burners

Rotary type. Burn low-cost heavy fuel oil with complete reliability. Models for every industrial need. Capacities up to 200 gallons per hour. Industrial gas models available, too.



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This commercial-industrial burner is the answer to seasonal fuel shortages. Makes possible advantages in economical fuel buying.

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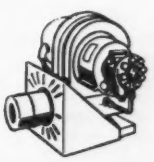
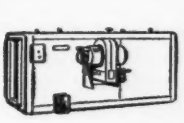
Made in popular sizes to fit the heating needs of homes of from 4 to 10 rooms. Extremely compact and attractive. Real fuel savers. Oil-fired boilers also available.



Residential and Commercial Conversion Burners

Oil burners for residential use. Commercial and industrial oil, gas and combination oil-gas burners. Residential oil burner illustrated.



Horizontal Oil Furnace

Hang it or hide it—this winter air conditioner fits anywhere. Available in 5 models from 80,000 to 180,000 Btu's (output at bonnet).

COMMERCIAL & INDUSTRIAL oilburning

Small Boiler heats oil for big Job using #6 oil

Owner insists on prolonged shutdowns for big Boiler; creates cold oil-line Problems

by
Jean L. Dupuis

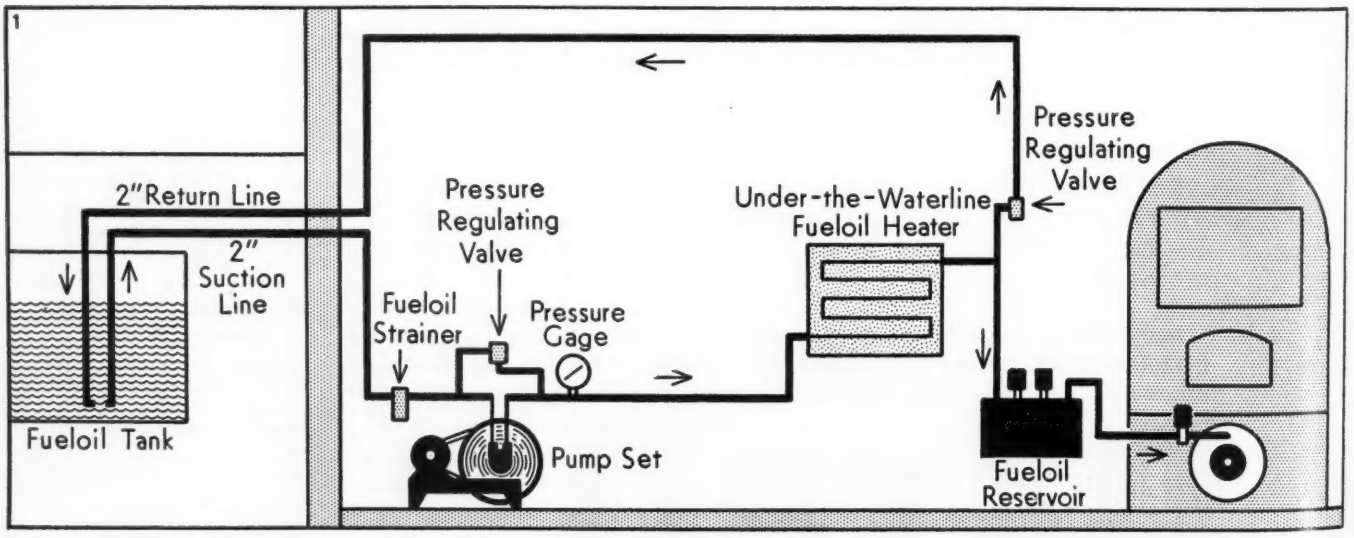
THE horizontal rotary cup burner installed four years ago in this 200 horsepower boiler failed to satisfy the owner, he kept on explaining to the dealer who had sold him the burner installation, because the burner's operation was not fully automatic.

The owner's version of fully automatic oilburner operation was: You snap a switch, and away she goes. The burner starts right up. No manual attention for it is needed.

He declared that after the burner was idle for a weekend in spring or fall, because over the weekend his factory needed no heat or low-pressure process steam, the oilburner should start right up when he snapped on a switch or raised the setting of a room thermostat. During the summer, usually he needed process steam from the boiler fired by the burner. But every so often, not needing process steam for a week or so, he turned off the burner and permitted the boiler to chill. Starting it again was difficult, to state it mildly, when the oil storage tank contained only the No. 6 fueloil which the burner was supposed to use —had been sold to use. He was more than reluctant to order the No. 5 oil which the installer of the burner told him to order to get out of the immediate difficulties—he was fighting mad about ordering No. 5 oil. After all, he reasoned, he'd paid a high price for a fully automatic burner capable of using No. 6 oil, because No. 6 oil was the most economical fuel for his factory. If he'd wanted to use No. 5 oil, he could have saved hundreds of dollars by buying a burner for No. 5 oil. The dealer had stuck him—sold him a burner installation supposed to use No. 6 oil, nothing else, but actually capable of using nothing heavier than No. 5 oil.

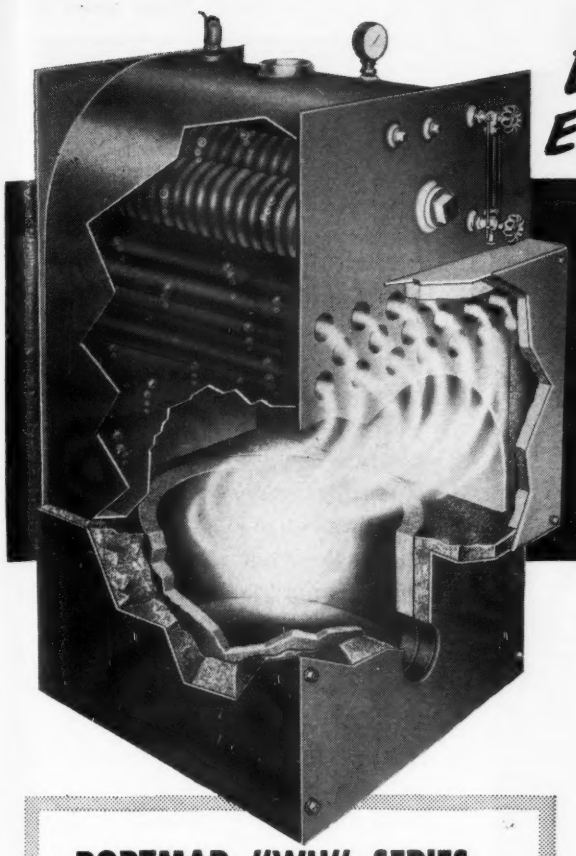
"I did not sell him a burner installation supposed to be fully automatic in every way he can imagine," the oilburner dealer said in explaining his difficulty with the owner of the factory. "To find out exactly what he had on his mind when he wanted to buy the burner job, I would have had to call in a psychoanalyst. It turns out now that he thinks a burner that fires an overworked 200 horsepower burner with No. 6 oil should be as fully automatic as the little pressure burner he's got to heat his house. It took him three years of using this horizontal rotary cup burner to gain an education in industrial burners. When he bought this job, he didn't know beans about such burners. Now he's gained ideas about what such burners should do and should not do. He won't take into consideration the fact that an eight-hour period of idleness lets the oil chill in more than 300 ft. of suction and return lines. He wants to let the lines chill for a week, then snap on a switch and start the burner.

"My contract states I sell him a fully automatic burner for No. 6 oil. That's precisely what I installed, and I can prove it by the label the manufacturer put on the burner. I made the installation in strict accordance with the instructions I got from the burner manu-



Diag. 1—*Burner layout shown here schematically gave trouble two ways. First, after oil lines became cold, starting was difficult—practically impossible with only No. 6 oil (no No. 5 oil) in tank. Second, combustion was inefficient except with boiler steaming. Dealer made the fueloil reservoir himself, borrowed ideas from many manufacturers of rotary cup burners. Pressure regulator valve over oil pump is set to open at 150 lbs. pressure, is not a relief valve. Valve over reservoir keeps reservoir pressure at 35 lbs.*

Exclusively Engineered to Serve Every Size and Type of Structure



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Automatically delivers large quantities of instantaneous, sanitary hot water through copper coils at less fuel cost

THE Portmar Volume Water Heater is ideal for new and conversion jobs. Satisfies all the clean hot water requirements in large homes • apartment houses • motels • restaurants • automatic laundries • hotels • hospitals • office buildings • luncheonettes • schools • gymnasiums • factories • processing plants, etc.

PORTMAR "WH" SERIES OIL OR GAS FIRED

For clean, compact, low cost domestic, commercial and industrial installations.

9 Sizes 350,000 to 1,650,000 BTU's per hour.

Hot Water Delivery: 300 to 1,500 GPH.

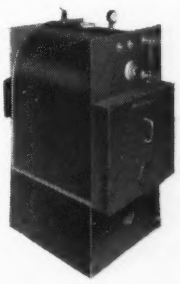
Units delivering 2,000 to 5,000 GPH available on request.

SUBMERGED TWIN COILS AN ENGINEERING ADVANCE Made of finned copper tubing, the twin coils are connected adjacent to each other, submerged horizontally in the hottest water, across the top section of the heater. One coil acts as a preheater, permitting complete hot water circulation through the coils.

ELIMINATES THE STORAGE TANK —REDUCES HIGH MAINTENANCE The heater is able to meet high instantaneous hot water requirements because temperatures of 227° maintained in the heater is stored heat which acts as a storage reserve—increases heating capacities 100%. Fast circulating hot water surrounding the submerged coils causes quick temperature pickup, requires no recovery time, makes the unit self-cleaning.

QUALITY WORKMANSHIP AND MATERIALS —A.S.M.E. APPROVED Ruggedly constructed to last, the sturdy shell is extra heavy steel plate. Heavy gage steel fire tubes are scientifically arranged to provide maximum heat transfer to rust-free, finned copper coils. Tested under high hydrostatic pressure, every water heater is fully guaranteed.

TWO TEMPERATURE HOT WATER SUPPLIED 140° for general use or 180° for sanitary-rinse of dishes, pots, etc. Simple piping arrangement of either tempering or by-pass valves allow a full supply of evenly tempered water, as desired.



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INDIRECT GAS FIRED FUEL OIL HEATER

for those *difficult* jobs that need special oil heating facilities

The Type "GF" Oil Heater is an integrated self-contained steam vapor generating exchanger using gas as its primary heat source.

However, the gas flame does not come in contact with the tubes containing the fuel oil. Instead, vapor from the lower steam generating section does the actual oil heating!

APPLICABLE TO ALL TYPES OF OIL FIRED APPARATUS!

THE PERFECT HEATER FOR:

- **Low temperature forced hot water heating systems on # 6 oil.**
- **Plants with starting difficulties after week-end shutdowns.**

Approved by Board of Standards and Appeals, City of New York—Cal. No. 362-51SA

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COMMERCIAL & INDUSTRIAL oilburning

facturer. So he's got a fully automatic burner for No. 6 oil, installed the way such a burner should be installed.

"He's stubborn. Won't, for example, keep the oilburner main switch closed at all times. Won't keep the boiler at 200°F. using the boiler temperature control I installed for that. Says that wastes too much of his precious No. 6 oil. He is stubborn enough to arrange things so that he don't need process steam for a week in summer, just to get himself into a predicament he can blame me for. If he's going to do such things, and shut off the big burner completely over weekends during the heating season, I tell him then he's got to use No. 5 oil, or at least part No. 5 oil and part No. 6 oil."

Installation Layout

Diag. 1 gives an idea of the installation layout. True, the dealer had made changes and improvements after thinking he had completed the job. These, the owner said, proved the original installation had been cheap and incomplete — had shortcomings the dealer was forced later to correct at considerable expense. To start out, the dealer had not provided the run-around pressure regulating valve at the pump set, for he'd thought the pressure regulator valve near the burner would protect against excessive oil pressure at the output side of the pump. It hadn't, however, when the return line was too cool for oil to flow through it after a weekend shutdown in cold weather. The pump had developed more than 150 lbs. pressure and caused the overload protector serving the pump motor to snap off. Luckily this overload protector worked nicely and prevented burning out the pump motor.

Both on his own and as the result of conferences with representatives of equipment manufacturers, the dealer had changed considerably the electric oil preheating equipment near the burner. He had tried electric oil preheaters that he applied directly to the

burner, and electric oil preheaters close to it as the drawing shows, but not on it. He wound up with the big oil reservoir shown, specially made for the job and fitted with two 3 KW oil heating elements. One of the temperature controls shown in the drawing controls the electric heaters; a relay is used, the control handles only the light current of the circuit of the solenoid in the relay. The first control is set at 180°. The second control, set at 160°, is wired to the oilburner control panel—prevents burner operation when the oil in the reservoir is cooler than 150°.

The pump set or auxiliary pump in Diag. 1 is simply started and stopped simultaneously with the burner motor.

With the boiler kept at 200° for standby, carrying no load, the burner started and stopped, did not "go off on safety" or break down in any way. Its operation was not something a dealer could demonstrate to his sales prospects or be proud of, however.

Hot Oil is needed

In discussing this, the burner dealer admitted, "It is true that using 100% No. 6 oil, the oil the owner wants to use, we get truly excellent combustion on this job only with the atomizing cup receiving very hot oil, oil hotter than 160° or 170°. With the burner running only occasionally while the boiler stands by at 200°, oil much cooler than that reaches the atomizing cup at times, even though I've got the two 3 KW electric oil preheaters near the burner. That's because the oil lines chill considerably during even a four hour "off" period. Cool oil from the long lines is fed to the reservoir. I'd put in a bigger reservoir equipped with even bigger electric oil preheaters, if the electric lines to the boiler room were not already overloaded. To run heavier electric feed lines to the boiler room would cost a fortune. Besides, the owner already is screaming about the outrageously high electricity consumption of the equipment I installed. He wants to use less electricity, not more.

"You should know this too, for it shows how complaining this guy can be," the burner dealer told me, "He raised Cain about the amount of bottled gas the burner's gas-electric ignition system used. To quiet him on

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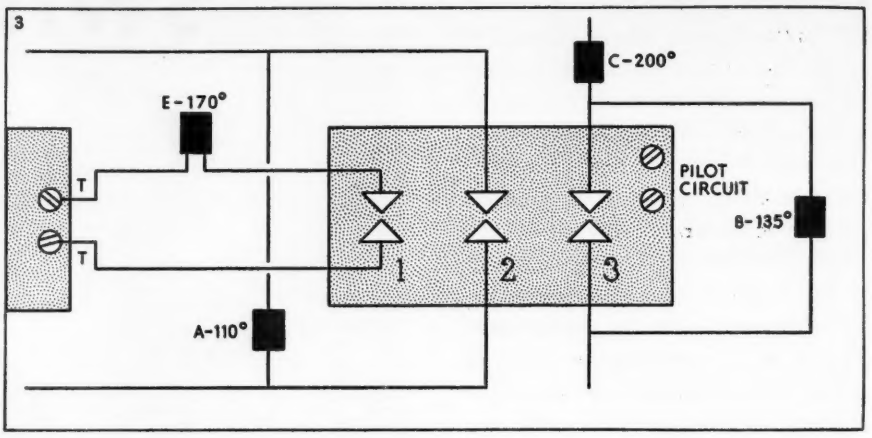


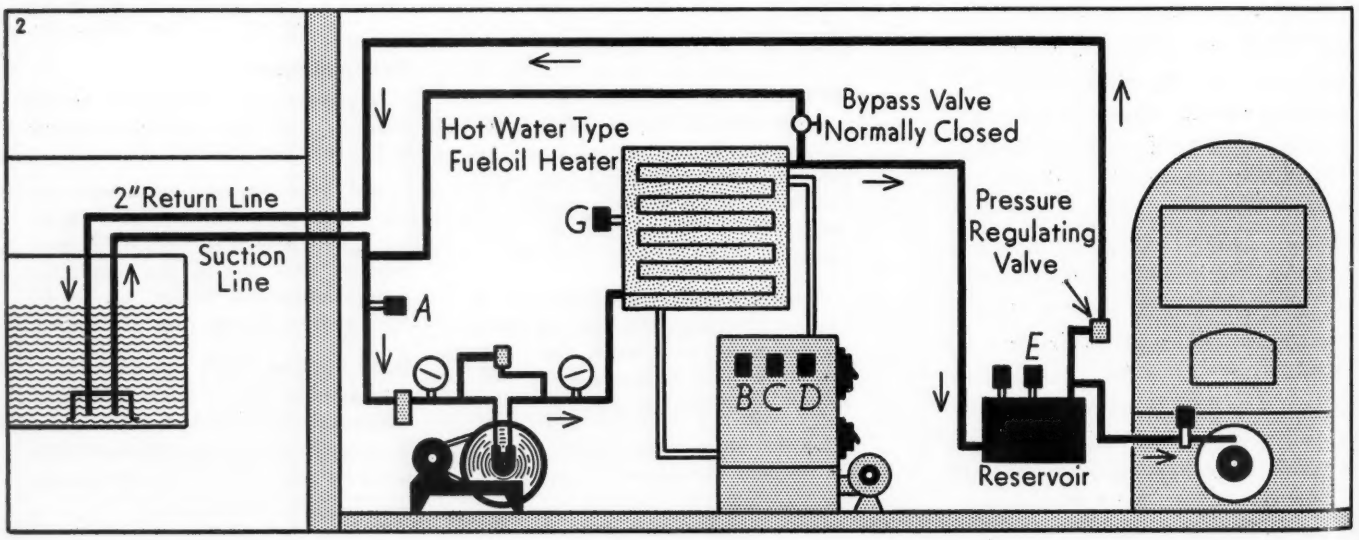
Diag. 3—*New three-pole, single-throw, normally-open relay snaps in when big burner should start. Controls and switches that start big burner are connected to pilot circuit of this relay. When relay snaps in, contacts #1 tell big burner to start—but only after hot oil in reservoir closes switch of control "E," reverse-acting and set at 170°. Contacts #2 cause pump set to run continuously when new relay is snapped in. Contacts #3 cause temperature of small boiler to shift from 135° to 200°.*

that point, I had to use tricks to cut the gas consumption 30% below what is usual for a job like this. This guy complains to me about everything he can!

"So I know that bigger or additional electric oil preheaters at the burner would help, would improve the burner operation with the boiler just standing by at 200°. The control that stops the burner when the reservoir temperature drops below 160° proves that. Every so often this control stops the burner during one of its standby runs. Also, we get much better combustion with the boiler steaming than with it standing by at 200°. With the boiler steaming an hour or more, fueloil that is really hot flows to the atomizing cup. Then, and only then, do we get decent readings from combustion testing instruments — CO_2 above 12%, and smoke readings lower than five, Shell-Bacharach scale."

The dealer plainly was dreaming of an ideal set-up that would give the burner oil hotter than 170°—a set-up that never would give the burner even one quart of oil cooler than 170°. Given the benefits of such a set-up, thousands of horizontal rotary cup burners now in use and doing poorly —just getting by and giving oilheating a bad name—would perform far better! Many dealers should be dreaming of arrangements to give already-installed, unsatisfactory big burners no oil cooler than 170°!

An erstwhile coal dealer who now is a fueloil dealer explains that in trying to teach homeowners how to fire coal properly he encountered many who would fist-fight him if he indicated they were not born firemen—they wanted no instructions, and thought they knew instinctively how to tend their very own, very peculiar furnaces. Just so, certain housewives will commit mayhem if told they are not the best wives, best mothers, and best cooks in the world. Just so, certain big-burner experts become outraged if one indicates that No. 6 fueloil can be handled and heated properly for an oilburner, with the use of some oilheating system different from the system they use regularly and put high on a pedestal. I know this may bring in letters from big-burner experts who



Diag. 2—*Hot-water boiler fired by pressure burner is added, serves only for heating oil. Closed expansion tank over fueloil heater is not shown here. Hot water coil is easy to install in tank bell on job of this type; circulator would be used, and hot water lines to tank would be grouped with fueloil suction and return lines, all lines insulated together. When big boiler is cold, control "A" starts and stops pump set, keeps point "A" between 110° and 120°. Small boiler then is kept at 135°. Fast pumping and temperature lag of control "A" cause hot oil to reach fueloil pump before control "A" stops it during such cycling.*

disagree with me, but I still reveal here the oilheating arrangement I recommended for this particular set of circumstances . . . without, however, desiring that readers infer that this is the best method for heating fueloil on all No. 6 oil jobs. This solution fits this particular problem.

The owner had to pay for the improvements shown in Diags. 2 and 3. He finally agreed to this, after it became clear to him that he had not gotten stuck with the burner installation. Now he wanted performance still better than he had purchased at a fair price. He could obtain the improved performance by paying a fair price for it. That he did, and he got what he wanted.

The small boiler near the center of Diag. 2 was installed just to heat oil for the big burner. Fired at 1.25 gph to avoid nozzle-plugging difficulties and provide ample output for quick heat pick-up, this new oil boiler uses light oil, being fired by a pressure burner. It is highly efficient; has excellent insulation and low smokepipe losses. The intention is to keep it warm, at a minimum temperature of 135°, throughout the year.

Tank Bell and its Purpose

A tank bell was installed to make certain all the No. 6 oil returned to the tank by the return line will find its way into the suction line. That's to conserve the heat in the returned oil. Also to conserve heat—heat in all the oil in all the heavy-oil lines—the boiler-room lines carrying No. 6 fueloil were insulated throughout by 85% magnesia pipe covering 1½" thick. That's most important on such a job!

Temperature control "B" keeps the small boiler at 135° on days when the big burner remains idle because neither heat nor process steam are needed from the big boiler.

Temperature control "A" in the suction line starts the pump set when the suction-line temperature at the indicated location drops to 110°. The pump set runs until the temperature at this point reaches 120° as the result of hot, returned oil flowing to the tank bell, then filling the suction line. The vacuum gage and pressure gage at the

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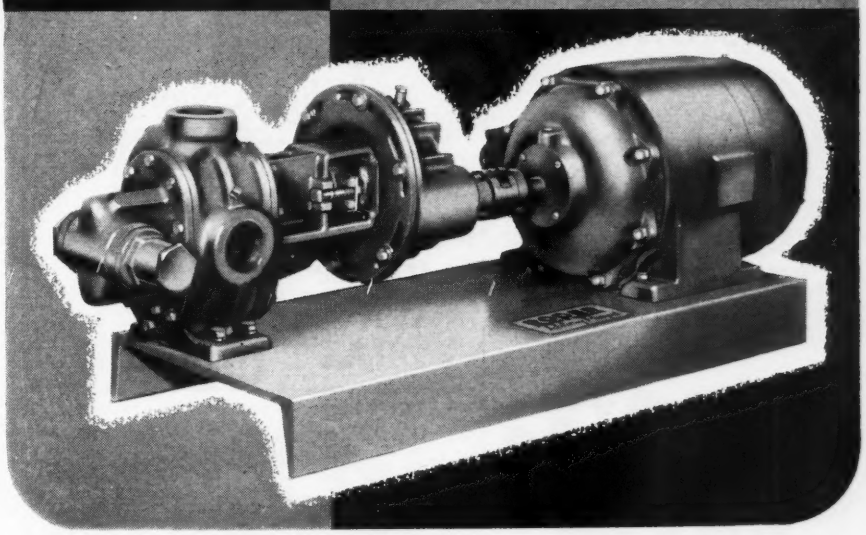

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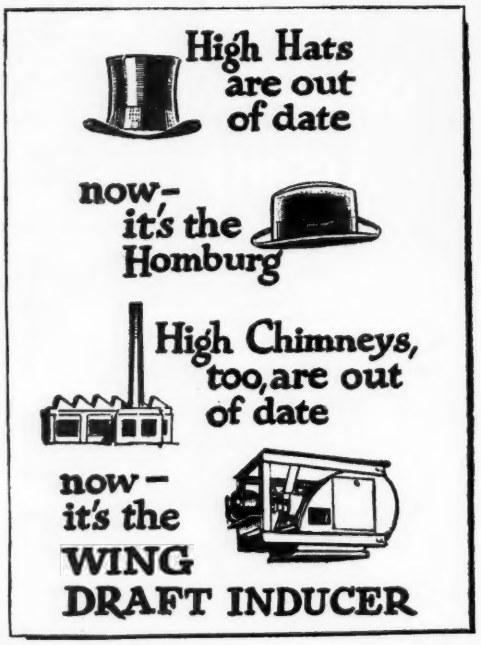

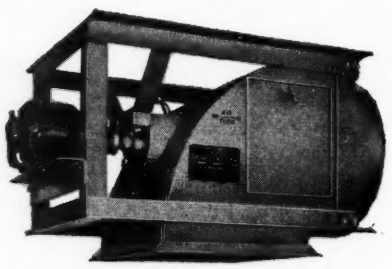

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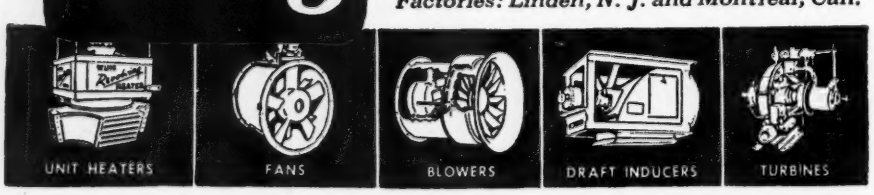

pump set show that setting for lower than the 110°-120° temperature at point "A" invites pumping difficulty. The result of using the temperature control at "A", to start and stop the pump set while the big burner remains idle, is the No. 6 oil lines are kept moderately warm using heat provided economically by the small boiler fired by No. 2 oil. A boiler used in a set-up of this type may use 1,000 to 2,500 gallons of light oil a year; it provides just one more account for a fueloil supplier.

The schematic wiring in Diag. 2 indicates what happens when the big burner should start. Here's the program:

1. When the big burner should start, its thermostat or the switch used to start it when process steam is needed, closes the pilot circuit of the new relay shown in Diag. 3; three sets of contacts in this relay snap closed.

2. Closing of the left-hand set of contacts in this relay eliminates one of two open points in the thermostat circuit of the electronic oilburner panel —with the result that when the tem-

The No. 6 fueloil delivered in recent years has become heavier and heavier. To cope with this, in many instances oilburner dealers and owners have been increasing the temperature of the oil fed to the atomizing cups of rotary burners. This article indicates how the cup-line temperature was increased on one installation. It does not state, however, that all horizontal rotary cup burners need 170° oil for their atomizing cups.

Every expert at commercial-industrial burners knows many ways —some of them new in recent years and particularly effective—to cope with the problem of chilling of heavy-fueloil pipe lines when automatic burners remain idle for hours. The author of this article does not discuss the advantages and disadvantages of different methods for applying heat to fueloil lines and their contents. He outlines how the fueloil lines of one installation are kept warm when heavy fueloil is not fired for days at a time, and indicates that the method used is to his mind well suited to the peculiarities of this particular installation, and to the peculiarities of the particular burner owner.

perature of the control "E" reaches 170° the big burner will start.

3. Closing of the middle contacts in this relay starts the pump set; the pump runs continuously while this relay is snapped in.

4. The right-hand contacts in the relay shunt the low-voltage temperature control on the small oilfired boiler, which keeps the boiler at 135° when the big boiler is idle. Control "C", also low-voltage, takes over and the small oilburner starts. Now the temperature of the small boiler will be increased to 200° (this could be 220°); it will remain at 200° while the new relay remains snapped in.

5. When the temperature of control "E" reaches 170°, the big burner will start because this control will snap on, completing the thermostat circuit of the big-burner control panel.

The fueloil heater connected to the new hot-water type boiler in Diag. 2 is more than 50% larger than the fueloil heater installed originally and shown in Diag. 1. Gravity circulation works satisfactorily on this job, but certain other installations of this type needed hot water circulators to speed the hot water through the oil heaters.

High limit temperature Control

Control "D" is a line-voltage high limit temperature control, wired in the live line to the stack control panel of the pressure burner that fires the small boiler. It is set 10° higher than control "C".

The reservoir in which control "E" is located still contains the two 3 KW oil heating elements, but now normally the main switch for these electric heaters is kept turned off. The result is a considerable savings in electricity. If turned on during any future emergency, as before these heaters will be controlled by a temperature control located in the reservoir and set at 180°.

The small boiler may become cold because it needs repairs, its burner breaks down, the electric current fails for hours, or the owner shuts it off while his plant closes down for a three-weeks summer vacation. Control "G" on the oil heater prevents the pump

DEVELOPMENT REPORT

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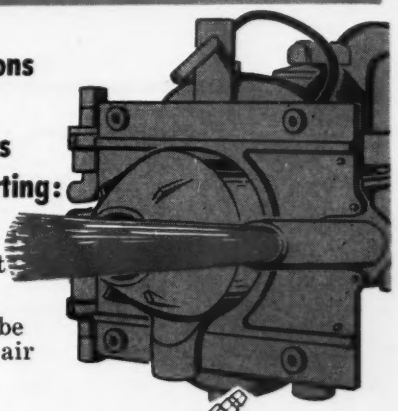
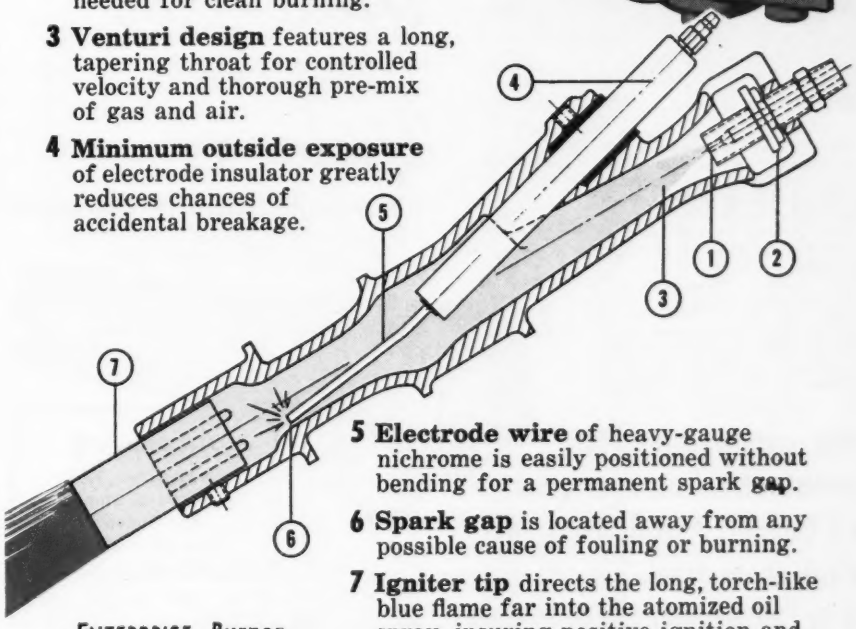


1 Adjustable spud is easily positioned to correctly project different types of gas at various pressures.

2 Precision-type air shutter can be set to provide the exact amount of air needed for clean burning.

3 Venturi design features a long, tapering throat for controlled velocity and thorough pre-mix of gas and air.

4 Minimum outside exposure of electrode insulator greatly reduces chances of accidental breakage.



5 Electrode wire of heavy-gauge nichrome is easily positioned without bending for a permanent spark gap.

6 Spark gap is located away from any possible cause of fouling or burning.

7 Igniter tip directs the long, torch-like blue flame far into the atomized oil spray, insuring positive ignition and preventing blow-away.

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set from running when the oil heater is cooler than 120°, thus prevents pump abuse or damage in case of a breakdown of the small boiler nights or weekends when the equipment is unattended.

After a complete shut-down, the small boiler should be started to heat the oil heater to 200°. Then the valve marked "Bypass Valve Normally Closed" should be opened and the pump set should be turned on for a few seconds at a time in an effort to have it circulate hot oil through the obvious small circuit. The two 3 KW electric heaters in the reservoir should be turned on about 15 minutes before efforts are made to circulate oil normally — these efforts would include closing the bypass valve gingerly for a few seconds at a time while observing the pressure gage at the output side of the pump set.

Multiple burner jobs and jobs having pump-type as well as no-pump horizontal rotary burners have benefited through use of oil heating set-ups of this type. Obviously the big boiler in this case could be fitted with an under-the-waterline or perhaps a steam-type heater, and the light-oil boiler could be turned off automatically whenever the big boiler is hot and capable of heating properly the No. 6 oil fed to the burner's atomizing cup. Most of the work of heating the No. 6 oil then would be done by low-priced Btu's from No. 6 oil instead of much more expensive Btu's from light oil fired in the small boiler. This idea was not used on this particular installation, because of complication for one thing; also the oil heater originally installed on the big boiler later was judged to be too small. However, this idea might be excellent for larger installations to which it can be applied easily.

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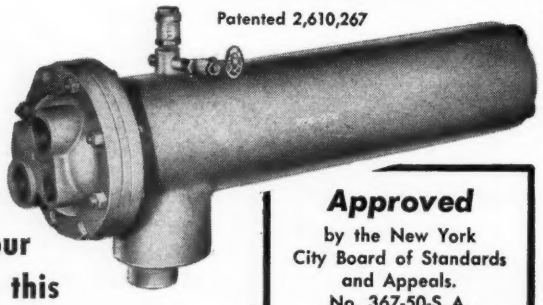

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Cleaver-Brooks sponsors Brooklyn dealer Meeting

A MEETING of Cleaver-Brooks' dealers of Metropolitan New York was held recently at the Hotel Granada, Brooklyn, N. Y. Attended by about 125 dealers and guests, the meeting was sponsored by Frank M. Wymbs, Eastern regional distributor of Hev-E-Oil burners.

A 15 gallon Hev-E-Oil burner, valued at $715, was raffled off at the end of the meeting. Winner was Abe Eisner of Automatic Heat Engineering Co., Brooklyn.

The gathering was featured by a luncheon for all dealers and guests. Wymbs reported about 37 burners sold to dealers during the meeting.

The formal parts of the session were marked by technical descriptions of Hev-E-Oil equipment, which burns No. 5 oil, and an explanation of sales policies.

❖

Service School conducted by Preferred at Danbury Plant

THE LARGEST SERVICE SCHOOL ever held by Preferred Utilities Mfg. Corp., New York, N. Y., was recently concluded. More than 70 students in attendance were divided into five groups assigned to company supervisors. Field inspection visits were made to Preferred installations in the Danbury,

Preferred Utilities *service school at the factory, Danbury, Conn., in which Frank Albert, Preferred's Danbury sales manager points out the efficient construction features of a unit steam generator. B. Fredericks of Pioneer Oil & Heat, Troy, N. Y., is at top center.*

Attending were 70 students and they were divided into five groups, separated to specific assignments such as testing and adjustment, repair, combination fuels, specifications, estimating, and the like. R. S. Bohn, president, William H. Bohn, sales manager, and J. S. Kaplan, vice-president, were the principal speakers at the sessions.

Conn., area.

Preferred's Danbury plant was the site of the supervised group sessions. While some of the groups were engaged in the testing and adjustment of an oilfired unit steam generator, in addition to a combination oil and gas burner unit, others worked on assembled burners. These men learned the latest methods of burner repair, pump packing, reservoir removal and hinge pin packing.

A discussion on fueloil and the proper methods of oil transportation and burning, in conjunction with piping layouts, was headed by G. W. Bohn, vice-president in charge of engineering.

Additional assembly meetings were held during the week under the chairmanship of William H. Bohn, sales manager; J. S. Kaplan, vice-president, R. G. Bohn and R. S. Bohn, president. A representative of Combustion Controls Company gave an equipment demonstration with the aid of slides and color movies.

Representatives of Minneapolis-Honeywell displayed the proper application of their electronic equipment as related to use on Preferred's burners. Later in the week's activity, Robert G. Bohn served as chairman of a session pertaining to the application of Preferred's accessory line of equipment to conversion burner installations.

A panel of experts on practical problems of installation and pitfalls to be avoided was conducted by some of Preferred's distributors, including Charles Velie, of Winfield S. Holman Co., John Weber, of All-Heat Service, N. J. and Joseph Parker, Preferred's Westchester distributor.

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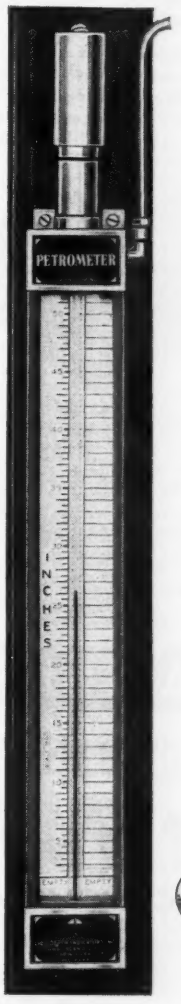

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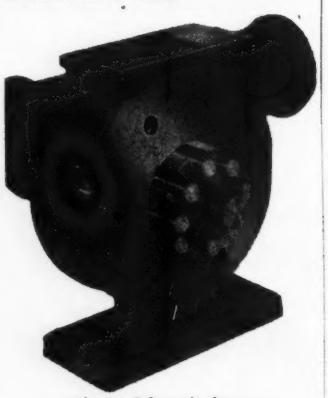

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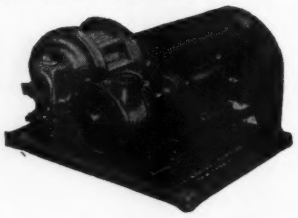

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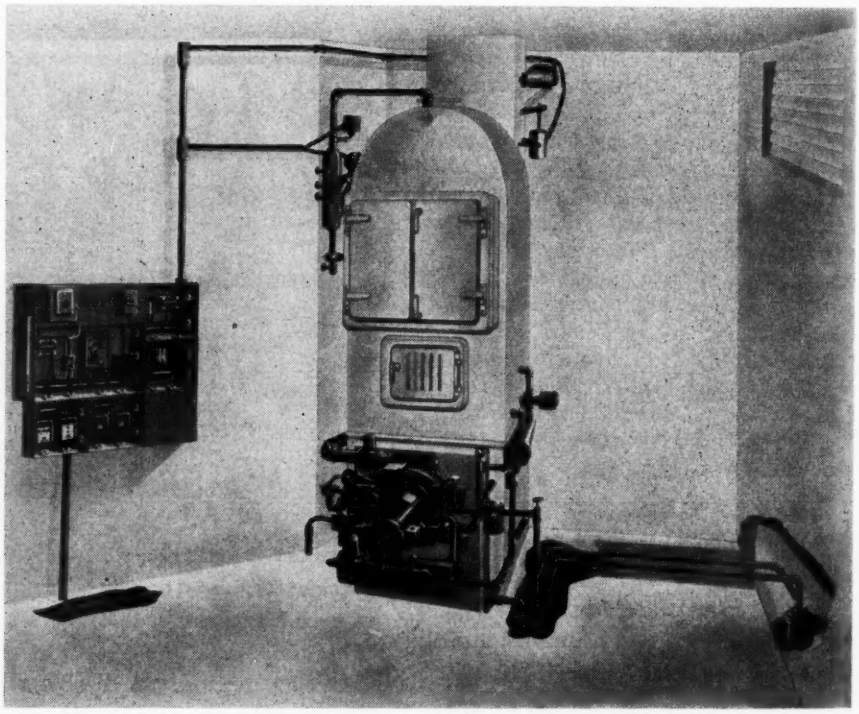
York-Shipley introduces conversion Package for large Boilers

AT A RECENT MEETING held at the Commodore Hotel in New York City for York-Power distributors a complete factory-coordinated industrial fuel burning system for the conversion of large boilers to oil or gas firing was introduced.

Developed by the Industrial Division of York-Shipley Inc. the F/C is a factory engineered, planned and processed industrial fuel burning system that consists of eight elements. These are the York rotary burner in a range from 18 to 400 HP., the F/C Windbox assembly, combustion refractory ring, factory-wired control panels, tank heater, oil pump set, oil heater assemblies and trim assembly



A typical installation *of a York-Shipley F/C industrial fuel burning system. The York-Power combination gas/oilburner is mounted on the F/C windbox assembly. Simplification of wiring and piping is illustrated. The control panels are shown with covers removed to demonstrate interconnecting wiring. The main control panel is upper left with sequence draft control, stack thermometer and draft indicator panels below it and the induced draft fan and master relay panels to the right. A spare panel is used in the lower right corner. Only the number of panels required to give the desired control need be installed. Panels can be added at any time without affecting basic wiring.*

Profit Builder For You

the SAFE, ECONOMICAL FUEL OIL ADDITIVE that

Instant Acting SABANOL

THE HOMOGENIZING FUEL OIL TREATMENT

- Gives Complete Burnability to Even the Cheapest Grades of Fuel Oil
- Keeps entire system clean from tank to burner to stack
- Removes and Prevents Sludge
- Contains an Exclusive Soot Retardant and Rust Inhibitor

STOPS TANK CORROSION FROM WATER DUE TO CONDENSATION

WRITE TODAY for EXCLUSIVE FRANCHISE DATA ON SABANOL and Territory Availability.

AMERICAN SAND BANUM CO
Established 1926
9 Rockefeller Plaza
New York 20, N.Y.

COMMERCIAL & INDUSTRIAL oilburning

of valves, and gauges for suction and discharge piping at burner.

The F/C factory wired control panels include five different types—the main control panel, induced draft fan panel. The main control panel is for primary burner and flame control and the induced draft fan panel for control of any size or make of induced draft fan, master and draft controls as well as stock thermometer and draft indicator panel. Control panels are made of 12 gauge steel with hinged and flanged covers. The main control panels are finished in two types—one for R-161 controls and the other for FP-2 flame control equipment.

Dave Wepman, director of merchandising for York-Shipley, presided at the meeting. Also present from York were G. D. Frank, industrial division manager, F. Bingaman, field service engineer, Chris Fry, field research engineer, as well as Emile Estoclet and George Athena, regional managers.

George Frank introduced the new system to the enthusiastic York-Power distributors and stated that now "the installer can buy from one source all of the components required for a complete factory-engineered installation at the best possible price." Other advantages, he continued, are "unity of responsibility for operation of the complete system plus cost savings on both original installation and operating costs."

Survey checks Dealers selling commercial-industrial Burners

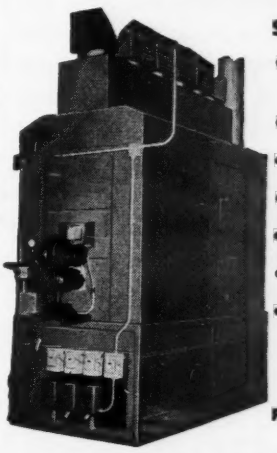
A POSTCARD QUESTIONNAIRE was circulated recently among a random sampling of FUELOIL & OIL HEAT subscribers to determine how many of them were selling or servicing commercial-industrial oilburners, No. 5 or

ARTCRAFT

Direct Fired

SPACE HEATERS

THE MOST MODERN, ECONOMICAL AND FLEXIBLE METHOD OF HEATING LARGE AREAS



SERIES "A" FOR
- INDUSTRIAL BUILDINGS
- BARRACKS
- REPAIR SHOPS
- HANGARS
- WAREHOUSES
- SCHOOLS
- RECREATION HALLS, CHURCHES, ETC.

FIRED WITH GAS OR OIL

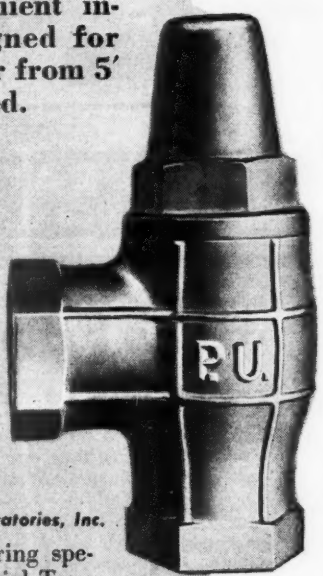
Capacities: 200,000-2,000,000 B.T.U.
(Also Suspended Furnaces, 75,000-750,000 B.T.U.)

Manufactured by
Chicago Steel Furnace Co.
9326 S. ANTHONY AVENUE
CHICAGO 17, ILL.

PREFERRED *INDUSTRIAL*
Anti-Syphon Valves

900 gallons per hour even with No. 6 oil...!

Angle type construction for convenient installation designed for heads up to 5′ or from 5′ to 10′ as required.



Preferred Industrial Anti-Syphon Valves can do the job better because they are designed better. A complete line of valves for pipe sizes of 1¼", 1½", 2", 2½" and 3". For use with all grades of fuel oil (including No. 6) and maximum capacity of 900 gallons per hour.

* Approved by Underwriters' Laboratories, Inc.

When ordering specify Industrial Type A and pipe size.

PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY · NEW YORK 23, N. Y.

SAFETY SWITCH
THAT SHUTS OFF FUEL IF BLOWER FAILS

Protection for Oil Burners
•
Industrial Ovens
•
Power Gas Burners

WHAT IT DOES

The Dewey Safety Air-flow Switch protects against opening of fuel valve until fan is up to speed.

Insures purging of furnace before fuel valve opens. Closes fuel valve if fan slows up or stops. Flashes danger signal if fan or fuel stops. Safeguards against danger from gas fuel failure when used in connection with safety shut-off valve.

Thousands sold. Factory Mutual and Underwriters Laboratories Approved. Standard equipment on leading products. Write for prices and literature.

DEWEY GAS FURNACE CO.
100 E. Baltimore Detroit 2, Mich.

FREE CIRCULAR

Dewey SAFETY AIRFLOW SWITCH

6 fueloils and if they were finding the Commercial-Industrial Section of the magazine useful. A total of 3,247 companies participated in the survey, geographically matched to the market.

Twenty-three per cent of the dealers are now selling No. 5 or 6 oilburners and, more importantly, 28% indicate that they will sell them this year. While it is to be expected that some oilheating dealers will service these heavy oil burners even though they do not sell them—29% report they service No. 5 or 6 oilburners—the fact that 28% say they will sell them this year indicates the increasing demand for such equipment and the increasing necessity for the oilheating dealer to expand his line.

Country-wide 21% of the dealers are selling No. 5 or 6 fueloil, divided geographically: New England, 17%; Middle Atlantic, 24%; Midwest 18%; South, 15% and Pacific, 30%.

Next, more than twice as many dealers as sell No. 5 or 6 oilburners say that the material published in the Commercial - Industrial Oilburning Section of FUELOIL & OIL HEAT each month is useful to them, 54% answering "Yes" to this question. By sections of the country, 46% of the New England dealers like the section; 55% of Middle Atlantic and Pacific companies find this material of help to them; 57% of the Midwest dealers obtain useful information from the Section, as do 47% of the dealers in the South.

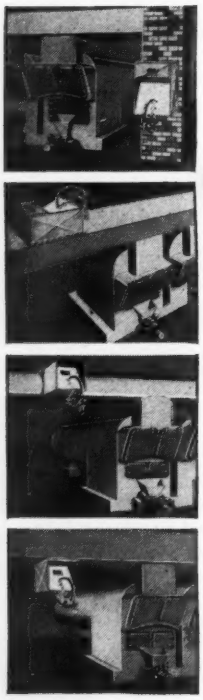
	Selling No. 5 or 6 Oilburners	*Will Sell In 1953*	*Servicing No. 5 or 6 Oilburners*	*Selling No. 5 or 6 Fueloil*	*Is the Com.-Ind. Section Useful*
New England	20%	24%	25%	17%	46%
Middle Atlantic	25	30	32	24	55
Midwest	22	27	27	18	57
South	25	35	24	15	47
Pacific	24	25	27	30	55
United States	23	28	29	21	54
Canada	28	37	25	15	85

In the Southern states, too, there will be recorded the largest increase in the number of dealers who are to handle commercial - industrial burners. There are 25% there who are presently handling this equipment; 35% say they will be selling it this year. Other sections reported: New England 20% now handling, 24% will sell; Middle Atlantic, 25% now handling, 30% will sell; Midwest, 22% now handling, 27% will sell and Pacific, 24% now handling, 25% will sell.

Canadian dealers also were included in the survey and 28% of them reported they now handled No. 5 or 6 oilburners and 37% intend to sell them this year. Only 25% of the Canadian dealers now are servicing No. 5 or 6 oilburners and only 15% of them sell residual fueloil for this equipment. But, 85% of these dealers reported that our Commercial-Industrial Oilburning Section contained useful information, highlighting the intense interest present among these Canadian companies.

The accompanying table summarizes the reports of the survey.

Make that next job a *better* job



— with a PREFERRED Industrial Draft-A-Justor!

A small detail but a big difference because you'll help your customer cut his fuel bill 10 to 30%! The Preferred Draft-A-Justor controls natural draft *automatically*. Statically balanced, easy to install and adjust. Can be mounted in any of the four positions shown — because it is 100% statically balanced.

Available in all sizes to meet your needs on any job. Write today for Bulletin 800

PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY · NEW YORK 23, N. Y.

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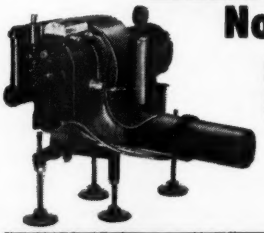
★ RAYFIELD AUTOMATIC ★



No. 5 OIL BURNERS

REDUCE HEATING COSTS... INCREASE YOUR PROFITS

Burn No. 5 heavy fuel oil. Self-contained, all electric. Self-lubricating. Many new exclusive features. Write for full details.

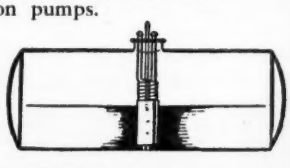
GOOD TERRITORIES OPEN

C. L. RAYFIELD CO.
2010-18 S. Halsted St., Chicago 8, Ill.

Solve Bulk Tank Preheating!!!

REMPE "Hot-Spot" PREHEATER

Heats heavy oils in bulk storage to proper flow temperature before they enter the suction line —takes load off suction pumps. Heating medium — steam or hot water. Construction — all steel — connections for any diameter tank.



Write for bulletin

REMPE COMPANY
336 N. SACRAMENTO BLVD. CHICAGO 12, ILL.

fueloil & oil heat's

DIRECTORY OF Machines, Tools, Metal and Special Products for Oilheating and Fueloil Dealer Shops

SECTION OF AUGUST 1953 ISSUE

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by

HEATING PUBLISHERS, INC.

2 West 45th Street, New York 36, N. Y.

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Joe ("Go-Gettem") Burnoil

THIS MYTHICAL CHARACTER represents the typical oilburner dealer. He's an old timer in the business, generally, who perhaps started as an oil dealer or maybe as a heating dealer. In time, though, being the smart and alert merchandiser that he is, he recognized the need for improving his services to the homeowner and making his position more secure by rendering complete oilheating service.

So, if he was an equipment dealer he took on fueloil and, if he had been an oil dealer he added burners.

Then, Joe not only made a profit on the oilheating equipment he sold, but he also realized a continuing profit on the fueloil. The close association with the homeowner that resulted assures the dealer a profit for years, so long as he keeps the customer satisfied with efficient and prompt service.

It's only natural, then, that oilheating dealers are the "Go-Gettem" type and it explains why they advertise, punch doorbells, solicit by telephone and work hard to sell—and generally outsell other types of heating dealers.

Last year more than half of the oilheating installations were made in warm air furnaces, requiring ducts and fittings. Just about 18% of these dealers operated their own sheet metal shops, 32% used prefabricated ducts and fittings and the remainder farmed such work out to local sheet metal men.

Because Joe couldn't always make his installation schedules coincide with the sheet metal man's and because he wanted to earn for himself the money involved in the contracts for ductwork, he—and thousands of other oilheating dealers like him—is planning to set up and operate his own sheet metal shop.

In New England 15% of the oilheating dealers indicate that they have such plans, in the Mid-Atlantic states 16% of these dealers are readying their own shop, 33% in both the South Atlantic states and the Midwest and 20% of the Pacific Northwest dealers intend to run their own shop to make ducts and fittings. Nationally the average is 22%.

So, better than one of every five oilheating dealers soon will be making warm air distribution equipment and will want to buy bending brakes, shears, seaming tools, slitting tools, notching, crimping and beading tools, lockformers, rolling and grooving machines, benders, burring tools, saws, punchers, slip roll formers, working benches, patterns, fixtures, jigs, portable, hand and bench machines and other sheet metal tools.

For this reason the Directory of Machines and Tools for sheet metal shops is published in convenient form. Types of equipment are in the listing beginning on page 101; company names and addresses start on page 110.

DIRECTORY OF
Machines, Tools, Metal and Special Products for Oilheating and Fueloil Dealer Shops
(Part I. Listed by types of equipment*)

Buffers, Grinders, Polishers & Sanders

Electric

Albertson & Co., Inc., Sioux City, Iowa
Baldor Electric Co., St. Louis, Mo.
Black & Decker Mfg. Co., Towson, Md.
Brown-Brockmeyer Co., Inc., Dayton, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Delta Mfg. Div., Milwaukee, Wisc.
DoAll Co., Des Plaines, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
H&H Research Co., Detroit, Mich.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Haskins Co., R. G., Chicago, Ill.
Hobart Bros. Co., Troy, Ohio
Independent Pneumatic Tool Co., Aurora, Ill.
Jefferson Machine Tool Co., Cincinnati, Ohio
Lee Co., K. O., Aberdeen, S. D.
L'Hommedieu & Sons Co., Charles F., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Marathon Electric Mfg. Corp., Wausau, Wisc.
Miller Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wisc.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill.
Porter-Cable Machine Co., Syracuse, N. Y.
Reynolds Electric Co., River Grove, Ill.
Rotor Tool Co., Cleveland, Ohio
Skil Corp., Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
Snap-on Tools Corp., Kenosha, Wisc.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tools Div., New Britain, Conn.
Stow Mfg. Co., Binghamton, N. Y.
Syntron Co., Homer City, Pa.
U. S. Electrical Tool Div., Cincinnati, Ohio
U. S. Electrical Motors, Inc., Los Angeles, Calif. (Buffers)
Valley Electric Co., St. Louis, Mo.
Wyzenbeek & Staff, Inc., Chicago, Ill.
York Electric & Machine Co., York, Pa.

Pneumatic

Chicago Pneumatic Tool Co., New York, N. Y.
Ideal Commutator Dresser Co., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Keller Tool Co., Grand Haven, Mich.
Porter-Cable Machine Co., Syracuse, N. Y.
Rotor Tool Co., Cleveland, Ohio (Portable)
Skil Corp., Chicago, Ill.
Sunstrand Machine Tool Co., Rockford, Ill.

Connectors, Duct

American Ventilating Hose Co., New York, N. Y.
Bauer & Black Div., Chicago, Ill. (Polyken industrial tape)
Corbman Bros., Inc., Philadelphia, Pa.
Felters Co., Inc., Boston, Mass. (Felt)
Flexible Tubing Corp., Guilford, Conn. (Coated Fabric)
Flexonics Corp., Maywood, Ill.
Grant Wilson, Inc., Chicago, Ill.
Iden Associates, Chicago, Ill.
St. Clair Rubber Co., Marysville, Mich. (Fiberglass)
U. S. Rubber Co., New York, N. Y.
Wagner Awning & Mfg. Co., Cleveland, Ohio
Wiremold Co., Hartford, Conn.

Drills, Portable

Electric

Albertson & Co., Inc., Sioux City, Iowa
Chicago Pneumatic Tool Co., New York, N. Y.
Cincinnati Electric Tool Co., Cincinnati, Ohio
Cummins Portable Tool Div., Chicago, Ill.
High Speed Hammer Co., Rochester, N. Y.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Mall Tool Co., Chicago, Ill.
Milwaukee Electric Tool Corp., Milwaukee, Wisc.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill.
Porter-Cable Machine Co., Syracuse, N. Y.
Precision Eqpt. Co., Chicago, Ill.
Rotor Tool Co., Cleveland, Ohio
Signal Electric Mfg. Co., Menominee, Mich.
Skil Corp., Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., New Britain, Conn.
Stow Mfg. Co., Binghamton, N. Y. (Flexible shaft)
Syntron Co., Homer City, Pa.
Thomas Co., Burgess, Bloomfield, N. J.
Time Saver Tools, Inc., Mundelein, Ill.
U. S. Electrical Tool Div., Cincinnati, Ohio
Van Dorn Electrical Tool Co., Towson 4, Md.
Wodack Electric Tool Corp., Chicago, Ill.
Wyzenbeek & Staff, Inc., Chicago 22, Ill.
York Electric & Machine Co., York, Pa.

Pneumatic

Air-Speed Tool Co., Los Angeles, Calif.
Black & Decker Mfg. Co., Towson, Md.
Chicago Pneumatic Tool Co., New York 17, N. Y.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
Rotor Tool Co., Cleveland, Ohio
Skil Corp., Chicago, Ill.

Drills, Portable, Electric or Pneumatic

Albertson & Co., Inc., Sioux City, Iowa
Buffalo Forge Co., Buffalo, N. Y.
Clark, Jr., Electric Co., Joseph, Louisville, Ky.
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wisc.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Snap-on Tools Corp., Kenosha, Wisc.
Speedway Mfg. Co., Cicero, Ill.
Tempo Prods. Co., Cleveland, Ohio (Powder operated)
U. S. Electrical Tool Div., Cincinnati, Ohio

Guns

Rivet

Chicago Pneumatic Tool Co., New York, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind rivet)
Ramset Fasteners, Inc., Cleveland, Ohio
Remington Arms Co., Inc., Bridgeport, Conn.
Div. Cherry Rivet, Santa Ana, Calif.

Spray, Metal

Albertson & Co., Inc., Sioux City, Iowa
Binks Mfg. Co., Chicago, Ill.
Black Mfg. Co., Harrison, N. J.
Champion Implement Corp., New York, N. Y.
DeVilbiss Co., Toledo, Ohio
Eclipse Air Brush Co., Newark, N. J.
Electric Sprayit Co., Sheboygan, Wisc.
Electro Dustless Painting, Inc., Elmwood, Conn.
Imperial Brass Mfg. Co., Chicago, Ill.
Plummer Spray Eqpt. Co., Napoleon, Ohio
Portable Electric Tools, Inc., Chicago, Ill.
Schori Process Div., Long Island City, N. Y.
Sellco Corp., Minneapolis, Minn.
Spray Eng. Co., Somerville, Mass.
Wall Colmonoy Corp., Detroit, Mich.

Hammers

Power

American Pneumatic Tool Co., New York, N. Y. (Pneumatic)
Black & Decker Mfg. Co., Towson, Md. (Electric)
Borm Mfg. Co., Elgin, Ill. (Pneumatic)
Chicago Pneumatic Tool Co., New York, N. Y.
Cleco Pneumatic Tool Div., Houston, Texas (Power-Riveting & Setting)
Coast Pneumatic Tool Co., Los Angeles, Calif. (Air)

*For complete address listings, see Part II.

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High Speed Hammer Co., Inc., Rochester, N. Y. (Power—Riveting & Setting)
Independent Pneumatic Tool Co., Aurora, Ill. (Electric & Pneumatic)
Ingersoll-Rand Co., New York, N. Y. (Air)
Keller Tool Co., Grand Haven, Mich. (Pneumatic)
Millers Falls Co., Greenfield, Mass. (Electric)
Milwaukee Electric Tool Corp., Milwaukee, Wisc.
Murray Mfg. Co., D. J., Wausau, Wisc. (Electric)
New England Carbide Tool Co., Inc., Cambridge, Mass. (Air)
Niagara Machine & Tool Works, Buffalo, N. Y. (Hand—Riveting & Setting)
Nobel & Stanton, Inc., Bedford, Ohio (Electric)
Phillips Drill Co., Chicago, Ill. (Electric)
Powder Power Tool Corp., Portland, Ore. (Powder charged)
Rotor Tool Co., Cleveland, Ohio (Pneumatic)
Skil Corp., Chicago, Ill. (Electric & Pneumatic)
Stanley Electric Tool Div., New Britain, Conn. (Electric)
Superior Pneumatic & Mfg., Inc., Cleveland, Ohio (Pneumatic)
Syntron Co., Homer City, Pa. (Electric)
Van Dorn Electric Tool Co., Towson, Md. (Electric)
Van Prods. Co., Erie, Pa. (Pneumatic-foot controlled)
Whiting Corp., Harvey, Ill. (Electric)
Whitney Mfg. Co., W. A., Rockford, Ill. (Hand—Riveting & Setting)
Wodack Electric Tool Corp., Chicago, Ill. (Electric)

Hoists

Hand
Cleveland Crane & Eng. Co., Wickliffe, Ohio
Ford Chain Block Div., York, Pa.
Harrington Co., Philadelphia, Pa.
Chester Hoist Div., Lisbon, Ohio
Reading Crane & Hoist Corp., Reading, Pa.
Robbins & Myers, Inc., Springfield, Ohio
Yale & Towne Mfg. Co., The, Philadelphia, Pa.

Power
American Eng. Co., Philadelphia, Pa.
Chicago Pneumatic Tool Co., New York, N. Y.
Independent Pneumatic Tool Co., Aurora, Ill.
Reading Crane & Hoist Corp., Reading, Pa.
Robbins & Myers, Inc., Springfield, Ohio
Yale & Towne Mfg. Corp., Reading, Pa.

Hoists, Hand or Power

American MonoRail Co., Cleveland, Ohio (Electric)
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Eng. Co., Wickliffe, Ohio (Electric)
Detroit Hoist & Machine Co., Detroit, Mich.
Electro Lift, Inc., New York, N. Y. (Electric)
Euclid Crane & Hoist Co., Euclid, Ohio (Electric)
Ford Chain Block Div., York, Pa. (Electric)
Harnischfeger Corp., Milwaukee, Wisc. (Electric)
Harrington Co., Philadelphia, Pa. (Electric)
Industrial Brownhoist Corp., Bay City, Mich.
Lisbon Hoist & Crane Co., Lisbon, Ohio (Electric)
Louden Machinery Co., Fairfield, Iowa
Lug-All Co., The, Wynnewood, Pa.
McCollum Hoist & Mfg. Co., Downers Grove, Ill.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Crane & Hoist Corp., Reading, Pa.
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Whiting Corp., Harvey, Ill. (Electric)
Wright Hoist Div., York, Pa.
Yale & Towne Mfg. Co., Philadelphia, Pa.

Machines, Sheet Metal

Bar, Folding
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis, Mo.
Smith, R. E., Waukegan, Ill.

Beading, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Kraus Mfg. Co., Charles E, Louisville, Ky.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.
Robertson, F. L., Buffalo, N. Y.

Beading, Power
Baker Bros., Inc., Toledo, Ohio
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Fallsington Mfg. Co., Fallsington, Pa.
Kling Bros. Eng. Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Wales-Strippit Corp., North Tonawanda, N. Y.

Benders
Bath Co., Cyril, Cleveland, Ohio (Contour formers)
Champion Blower & Forge Co., Lancaster, Pa.
Connors & Davis Sales Corp., West Springfield, Mass.
Excelsior Tool & Machine Co., East St. Louis, Ill. (Circular bending)
Hendley & Whittemore Co., Beloit, Wisc.
Hossfeld Mfg. Co., Winona, Minn.
Kane & Roach, Inc., Syracuse, N. Y.
Kling Bros. Eng. Works, Chicago, Ill.
Knights Co., James, Sandwich, Ill.
Malco Prods., Minneapolis, Minn.
Martens & Stormoen, Boston, Mass.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa. (Shrinkers & stretchers)
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Pedrick Tool & Machine Co., Philadelphia, Pa.
Smith, R. E., Waukegan, Ill.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Hand
Acme Eqpt. Co., Inc., Chicago, Ill.
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkoy Prods., Inc., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
G&S Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Stueck, Inc., W. Whitney, Saybrook, Conn.
Ward Machinery Co., Chicago, Ill.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Portable
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill. (Air)
G&S Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox, Southington, Conn.
Stueck, Inc., W. Whitney, Saybrook, Conn.
Vyke Brake Co., Omaha, Nebr.
Verson All Steel Press Co., Chicago, Ill.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Power
Bath Co., Cyril, Cleveland, Ohio
Cincinnati Shaper Co., Cincinnati, Ohio
Cleveland Crane & Eng. Co., Wickliffe, Ohio
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
Heartley Machine & Tool Co., Toledo, Ohio
Munton Mfg. Co., Franklin Park, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Verson Allsteel Press Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Brakes, Press
Bath Co., Cyril, Cleveland, Ohio
Cincinnati Shaper Co., Cincinnati 25, Ohio
Connors & Davis Sales Corp., West Springfield, Mass.
Dreis & Krump Mfg. Co., Chicago, Ill.
Doelger & Kirsten, Inc., Milwaukee, Wisc.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Stueck, Inc., W. Whitney, Saybrook, Conn.
Verson Allsteel Press Co., Chicago, Ill.

LOCKFORMER

Standard Equipment
in large shops

. . . . a "must"
in small shops

Lockformers have long since been "taken for granted" in large sheet metal shops the country over . . . are accepted as standard equipment along with shears, brakes and other essential equipment.

Because Lockformers make Pittsburghs and other locks *15 to 20 times as fast as hand methods*, the shop *without* a Lockformer is at a distinct handicap —both in bidding low enough to land the business and in fabricating the job cheaply enough to make a satisfactory profit.

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One Man with a Lockformer makes more Pittsburgh Locks than sixteen men with Eight Brakes

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Burring, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Burring, Power
Independent Pneumatic Tool Co., Aurora, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotor Tool Co., Cleveland, Ohio

Cleat Bending, Hand
Flagler Mfg. Co., Roy G., Detroit 34, Mich.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago 47, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Riverside Machinery Co., Minneapolis, Minn.
Smith, R. E., Waukegan, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Combination, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Ingram Machinery Co., Picher, Okla.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.

Combination, Power
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.
Wysong & Miles Co., Greensboro, N. C.
Ward Machinery Co., Chicago, Ill.

Crimping, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Ingram Machinery Co., Picher, Okla.
Kraus Mfg. Co., Charles E., Louisville, Ky.
Malco Prods., Minneapolis, Minn.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.

Crimping, Power
Fallsington Mfg. Co., Fallsington, Pa.
High Speed Hammer Co., Inc., The, 313 Norton Street, Rochester 21, N. Y.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.

Elbow, Hand
Barth Mfg. Co., Milldale, Conn.
Kane & Roach, Inc., Syracuse, N. Y. (Downspout elbows)
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Elbow, Power
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Filing
Air Speed Tool Co., Los Angeles, Calif.
DoAll Co., Des Plaines, Ill.
Grob Bros., Grafton, Wisc.

Flanging, Hand
Barth Mfg. Co., Milldale, Conn.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Lockformer Co., Chicago, Ill.
Malco Prods., Minneapolis, Minn.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
"Original" Metal Flangine Machine Works, Seattle, Wash.
Peck, Stow & Wilcox Co., Southington, Conn.
Smith, R. E., Waukegan, Ill.
Ward Machinery Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.

Flanging, Power
Baker Bros., Inc., Toledo, Ohio
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cincinnati Shaper Co., Cincinnati, Ohio
Cleveland Punch & Shear Works Co., Cleveland, Ohio
Flagler Corp., The, Detroit, Mich.
Kling Bros. Eng. Works, Chicago, Ill.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Verson Allsteel Press Co., Chicago, Ill.
Ward Machinery Co., Chicago, Ill.
Whiting Corp., Harvey, Ill.

Grooving, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.

Grooving, Power
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Standard Power Groove Machine Corp., New York, N. Y.
Ward Machinery Co., Chicago, Ill.

Lockforming, Power
Connors & Davis Sales Corp., West Springfield, Mass.
Flagler Corp., The, Detroit, Mich.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.

Nibbling, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Beverly Shear Mfg. Co., Chicago, Ill.
Fenway Machine Sales Co., Inc., Philadelphia, Pa.
National Machine Tool Co., Racine, Wisc.

Nibbling, Power
Baker Bros., Inc., Toledo, Ohio
Berkroy Prods., Inc., Burbank, Calif.
Campbell Machine Div., Bridgeport, Conn.
Fenway Machine Sales Co., Inc., Philadelphia 3, Pa.
H. A. Mfg. Co., York, Pa.
Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
Libert Machine Co., Green Bay, Wisc.
St. Louis Tool Co., St. Louis, Mo.
Savage Co., W. J., Knoxville, Tenn.
Wales-Strippit Corp., No. Tonawanda, N. Y.

Nibbling, Hand or Power
Arduini Mfg. Co., Worcester, Mass.
Gray Machine Co., Philadelphia, Pa.
Kirstein Specialties, Rochester, N. Y.

Notching, Hand
Fallsington Mfg. Co., Fallsington, Pa. (also power)
Hendley & Whittemore Co., So. Beloit, Ill.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Thor Tool & Die Co., San Leandro, Calif.
Whitney Metal Tool Co., Rockford, Ill.

Pittsburgh Lockforming
Dahlstrom Machine Works, Inc., Chicago 30, Ill.
Flagler Corp., The, Detroit, Mich.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Riverside Machinery Co., Minneapolis, Minn.
Verson Allsteel Press Co., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Pittsburgh Lock Openers
Birks Mfg. Co., Meriden, Conn.
Bristol Metal Working Eqpt., Hartford, Conn.
Maplewood Machinery Co., Chicago, Ill.

Presses
Baker Bros., Inc., Toledo, Ohio (Die Cushions)
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Bath Co., Cyril, Cleveland, Ohio
Beatty Machine & Mfg. Co., Hammond, Ind.
Bertsch & Co., Cambridge City, Ind.
Benchmaster Mfg. Co., Gardena, Calif.
Bliss Co., E. W., Canton, Ohio
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cincinnati Shaper Co., Cincinnati, Ohio
Clearing Machine Corp., Chicago, Ill. (Presses)
Cleveland Crane & Eng. Co., Wickliffe, Ohio
Cleveland Punch & Shear Works Co., Cleveland, Ohio
Clough Machine & Small Tool Co., Barre Plains, Mass.

Davis & Son Machine Works, Los Angeles, Calif. (Gov't. Lock Foot Press)
Diamond Machine Tool Co., Pico, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wisc.
Dreis & Krump Mfg. Co., Chicago, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Famco Machine Co., Kenosha, Wisc.
Farquhar Co., A. B., York, Pa.
Federal Machine & Welder Co., Warren, Ohio
Henry & Wright Div., Hartford, Conn.
Highland Eng. Co., Santa Monica, Calif.
Johnson Machine & Press Corp., Elkhart, Ind.
Leslie Welding Co., Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Munton Mfg. Co., Franklin Park, Ill.
New Albany Machine Mfg. Co., New Albany, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pacific Industrial Mfg. Co., Oakland, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Rafter Machine Co., Belleville, N. J.
Ryerson & Son, Inc., Joseph T., Chicago, Ill.
Service Machine Co., Elizabeth, N. J.
Streine Tool & Mfg. Co., New Bremen, Ohio
Swain Mfg. Co., Fred J., St. Louis, Mo.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Verson Allsteel Press Co., Chicago, Ill.
Wales Strippit Corp., North Tonawanda, N. Y.
Ward Machinery Co., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.
Wilson, K. R., Buffalo, N. Y. (Presses)
Wysong & Miles Co., Greensboro, N. C.
Zeh & Hahnemann Co., Newark, N. J.

Punches, Power
Beatty Machine & Mfg. Co., Hammond, Ind.
Bliss Co., E. W., Canton, Ohio
Buffalo Forge Co., Buffalo, N. Y.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio
Davis & Son Machine Works, Los Angeles, Calif.
Diamond Machine Tool Co., Pico, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wisc.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Famco Machine Co., Kenosha, Wisc.
Hendley & Whittemore Co., Beloit, Wisc.
Henry & Wright Div., Hartford, Conn.
Highland Eng. Co., Santa Monica, Calif.
Kling Bros. Eng. Works, Chicago, Ill.
Maxant Button & Supply Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Progressive Welder Sales Co., Detroit, Mich.
Rotex Punch Co., Oakland, Calif.
Royersford Fdry. & Machine Co., Royersford, Pa.
Swaine Mfg. Co., Fred J., St. Louis, Mo.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Verson Allsteel Press Co., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.

Rollforming, Power
Dahlstrom Machine Works, Chicago, Ill.
Flagler Corp., The, Detroit, Mich.
Hendley & Whittemore Co., So. Beloit, Ill.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox, Southington, Conn.
Yoder Co., Cleveland, Ohio

Saws, Band, Sheet Metal
Atkins & Co., E. C., Indianapolis 9, Ind.
Barnes Co., Inc., W. O., Detroit, Mich.
Bett-Mar Mfg. Co., Hopkins, Minn.
Clemson Bros., Inc., Middletown, N. Y.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Famco Machine Co., Kenosha, Wisc.
Grob Bros., Grafton, Wisc.
Miller Falls Co., Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Tannewitz Works, Grand Rapids, Wisc.
Wells Mfg. Corp., Three Rivers, Wisc.

Saws, Hack, Power
Air Speed Tool Co., Los Angeles, Calif.
Alpha Tool & Supply Co., Westwood, N. J.
Barnes Co., Inc., W. O., Detroit, Mich.
Champion Blower & Forge Co., Lancaster, Pa.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
Milwaukee Electric Tool Corp., Milwaukee, Wisc.
Racine Hydraulics & Machinery, Inc., Racine, Wisc.
Robertson, F. L., Buffalo, N. Y.
Royersford Fdry. & Machine Co., Royersford, Pa.
Simmonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Skil Corp., Chicago, Ill.

Seaming, Hand
Enderle, Ltd., Frank X., Los Angeles, Calif.
Malco Prods., Minneapolis, Minn.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

Seaming, Power
Bliss Co., E. W., Detroit, Mich.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Progressive Welder Sales Co., Detroit, Mich.
Stamco Inc., New Bremen, Ohio
Swain Mfg. Co., Fred J., St. Louis, Mo.

Setting Down, Hand
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Setting Down, Power
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Setting Down, Hand or Power
Barth Mfg. Co., The, Milldale, Conn.
Maplewood Machinery Co., Chicago 47, Ill.

Shears, Circle, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Beverly Shear Mfg. Co., Chicago, Ill.
Klenk Aviation Snips, Karl, Wilmington, Del.
McCoy Prods. Co., Salt Lake City, Utah
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Power
Baker Bros., Inc., Toledo, Ohio
H. A. Mfg. Co., York, Pa.
Kling Bros. Eng. Works, Chicago, Ill.
Libert Machine Co., Green Bay, Wisc.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Wales-Strippit Corp., North Tonawanda, N. Y.
Whiting Corp., Harvey, Ill.

Shears, Electric, Portable
American Pullmax Co., Inc., Chicago, Ill.
Black & Decker Mfg. Co., Towson, Md.
H. A. Mfg. Co., York, Pa.
Independent Pneumatic Tool Co., Aurora, Ill.
Jefferson Eng. & Mfg. Co., Detroit, Mich.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa. (Electric or pneumatic drill attachment)
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Skil Corp., Chicago, Ill.
Stanley Electric Tools, New Britain, Conn.
Van Dorn Electric Tool Co., Towson 4, Md.
York Electric & Machine Co., York, Pa.

Shears, Rotary, Slitting, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Champion Blower & Forge Co., Lancaster, Pa.
Marshalltown Mfg. Co., Marshalltown, Iowa
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.

Shears, Rotary, Slitting, Power
Baker Bros., Inc., Toledo, Ohio
Bliss Co., E. W., Canton, Ohio
Kling Bros. Eng. Works, Chicago, Ill.
Lock Former Co., The, Chicago 50, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Knives)
Stanley Electric Tools, New Britain, Conn.
Wheelock Co., George F., Birmingham, Ala.
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.

Shears, Squaring, Foot
Acme Eqpt. Co., Inc., Chicago, Ill.
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Diamond Machine Tool Co., Los Angeles, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Famco Machine Co., Kenosha, Wisc.
Highland Eng. Co., Santa Monica, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

Shears, Squaring, Power
Acme Eqpt. Co., Inc., Chicago, Ill.
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Bliss & Co., E. W., Canton, Ohio
Cincinnati Shaper Co., Cincinnati, Ohio
Cleveland Punch & Shear Works Co., Cleveland, Ohio
Cleveland Crane & Eng. Co., Wickliffe, Ohio
Columbia Machinery Corp., Hamilton, Ohio
Diamond Machine Tool Co., Pico, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Famco Machine Co., Kenosha, Wisc.
Frederick Iron & Steel, Inc., Frederick, Md.
Johnson Machine & Press Corp., Elkhard, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Stamco, Inc., New Bremen, Ohio
Thomas Machine Mfg. Co., Pittsburgh, Pa. (¼ in. and heavier)
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

Shears, Squaring Foot or Power
National Machinery & Eqpt. Co., Washington 7, D. C.

Slip Roll Forming, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Frederick Iron & Steel, Inc., Frederick, Md.
Hendley & Whittemore Co., Beloit, Wisc.
Milton Eqpt. Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Riverside Machinery Co., Minneapolis, Minn.
San Angelo Fdry. & Machine Co., San Angelo, Texas
Wyson & Miles Co., Greensboro, N. C.

Slip Roll Forming, Power
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Hendley & Whittemore Co., Beloit, Wisc.
Kling Bros. Eng. Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Milton Eqpt. Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Reed Eng. Co., Carthage, Mo.
San Angelo Fdry. & Machine Co., San Angelo, Texas
Wysong & Miles Co., Greensboro, N. C.

Slitting, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Beverly Shear Mfg. Co., Chicago, Ill.
Buffalo Forge Co., Buffalo, N. Y.
Hendley & Whittemore Co., Beloit, Wisc.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Maplewood Machinery Co., Chicago 47, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Tool Co., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Slitting, Power
Bertsch & Co., Cambridge City, Ind.
Besco Mfg. Co., Cincinnati, Ohio
Bliss Co., E. W., Canton, Ohio
Buffalo Forge Co., Buffalo, N. Y.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Crane & Eng. Co., Wickliffe, Ohio
Dahlstrom Machine Works, Chicago, Ill.
Hendley & Whittemore Co., Beloit, Wisc.
Kane & Roach, Inc., Syracuse, N. Y.
Libert Machine Co., Green Bay, Wisc.
Lock Former Co., The, Chicago 50, Ill.
Maplewood Machinery Co., Chicago, Ill.
Merchandising & Mfg. Association, Inc., Lancaster, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Peterson Sheet Metal Co., R. H., Hayward, Calif.
St. Louis Tool Co., St. Louis, Mo.
Stamco, Inc., New Bremen, Ohio
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.
Yoder Co., Cleveland, Ohio

Wiring, Hand
Barth Eng. & Mfg. Co., Inc., Milldale, Conn.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Wiring, Power
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

Mallets

Metal Working
Allen, Charles I., Pequabuck, Conn.
Bartlett Mfg. Co., Detroit, Mich.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
Bernz Co., Inc., Otto, Rochester, N. Y.
Boget & Hopper, Inc., New York, N. Y.
Chicago Rawhide Mfg. Co., Chicago, Ill. (Rawhide)
Densewood Co., Elkhorn, Wisc. (Wood)
Division Lead Co., Chicago, Ill. (Lead)
Goodrich Co., B. F., Akron, Ohio (Rubber)
Greene, Tweed & Co., New York, N. Y. (Plastic rawhide composition copper & babbitt)
Hexdall Co., A. M., Morris, Ill.
Lignum-Vitae Prods. Corp., Jersey City, N. J.
Malleable Mfg. Co., Los Angeles, Calif.
Maplewood Machinery Co., Chicago, Ill.
Miller Rubber Co., Akron, Ohio
New Plastic Corp., Hollywood, Calif. (Plastic)
Niagara Machine & Tool Works, Buffalo, N. Y. (Hickory)
Parker-Kalon Corp., New York, N. Y.
Reiner & Campbell, Inc., Elizabeth, N. J.
Republic Rubber Div., Youngstown, Ohio (Rubber)
Southwest Mfg. Co., Santa Ana, Calif. (Plastic tipped)
Stanley Tools, New Britain, Conn. (Soft Face Hammers)
Stossel & Sons Co., Carl, Front Royal, Va. (Hickory & Dogwood)
Warren Handle Works, Cortland, Ohio

Punches

Bench
Barth Mfg. Co., The, Milldale, Conn.
Berkroy Prods., Inc., Burbank, Calif.
Blum & Co., Inc., Julius, New York 11, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Diamond Machine Tool Co., Los Angeles, Calif.
Excelsior Tool & Machine Co., East St. Louis, Mo.
Heartley Machine & Tool Co., Toledo, Ohio
Helmold & Bro., Inc., J. F., Chicago, Ill.
Hendley & Whittemore Co., Beloit, Wisc.

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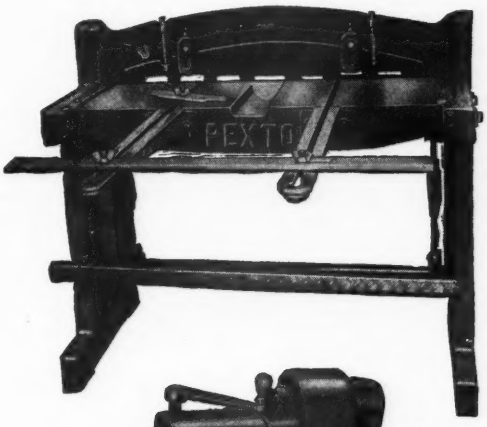
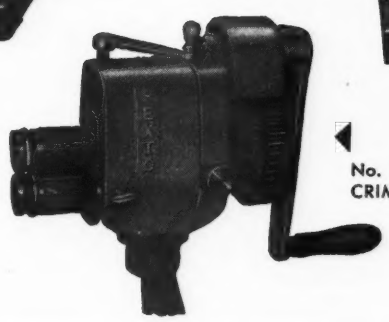
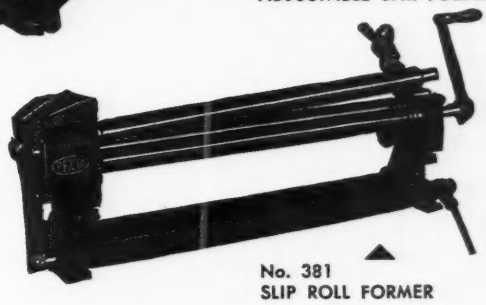


No. 137
SQUARING SHEAR

No. 63
ADJUSTABLE BAR FOLDER



No. 0585
CRIMPER & BEADER



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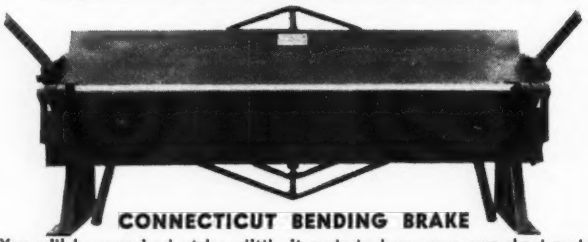

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Bett-Marr Mfg. Co., 621 Excelsior Ave., E., Hopkins, Minn.
Beverly Shear Mfg. Co., 3004 W. 111th St., Chicago 43, Ill.
Bingham-Harbrand Corp., Fremont, Ohio
Binks Mfg. Co., 3124 W. Carroll Ave., Chicago 12, Ill.
Birdsell Mfg. Co., 871 San Antonio Rd., Palo Alto, Calif.
Birks Mfg. Co., 809 Hanover St., Meridan, Conn.
Black & Decker Mfg. Co., The, 641 Pennsylvania Ave., Towson 4, Md.
Black Mfg. Co., 201 Second St., Harrison, N. J.
Bliss Co., E. W., 1375 Raff Rd., S. W., Canton, Ohio
Blum & Co., Inc., Julius, 530 W. 22d St., New York 11, N. Y.
Boges & Hopper, Inc., New York, N. Y.
Borm Mfg. Co., 23 No. Union St., Elgin, Ill.
Bremil Mfg. Co., Pittsburgh Ave. and Miller St., Erie, Pa.
Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
Bridgeport Chain & Mfg. Co., 964 Crescent Ave., Bridgeport 1, Conn.
Bristol Metal Working Eqpt., 534 Front St., Hartford, Conn.
Brown-Brockmeyer Co., Inc., 1098 Smithville Rd., Dayton 1, Ohio
Buffalo Forge Co., 470 Broadway, Buffalo, N. Y.

—C—

Callahan Can Machine Co., Inc., 80 Richards St., Brooklyn, N. Y.
Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.
Campbell Machine Div., American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.
Canatsey Electric Mfg. Co., P. O. Box 556, Kansas City 8, Mo.
Cartwright & Son, J., Malaha, Calif.
Central Steel & Wire Co., 3000 W. 51st, Chicago, Ill.
Central Transformer Corp., Pine Bluff, Ark.
Champion Blower & Forge Co., Harrisburg Ave. and Charlotte St., Lancaster, Pa.
Champion Implement Corp., 45 W. 45th St., New York, N. Y.
Champion Tool Co., 4261 So. Broadway, Los Angeles 37, Calif.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Chemally Associates, Gillespie Airport, Santee, Calif.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17, N. Y.
Chicago Rawhide Mfg. Co., 1301 N. Elston Ave., Chicago 22, Ill.
Cincinnati Shaper Co., Stock Yard Sta., Cincinnati 25, Ohio
Chicago Steel Service Co., 4444 So. Kildare, Chicago 32, Ill.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Fremont Ave., Tonawanda, N. Y.
Cincinnati Electric Tool Co., Cincinnati, Ohio
Cincinnati Shaper Co., Cincinnati 25, Ohio
Clark Co., Robert H., 9330 Santa Monica Blvd., Beverly Hills, Calif.
Clark-Hopkins Eqpt. Corp., 1124 Spring Garden St., Philadelphia 23, Pa.
Clark Jr. Electric Co., James, 600 E. Bergman St., Louisville 3, Ky.
Clearing Machine Corp., 6499 W. 65th St., Chicago 38, Ill.
Cleco Pneumatic Tool Div., Houston, Texas
Clemson Bros., Inc., Middletown, N. Y.
Cleveland Crane & Eng. Co., 8676 E. 289th St., Wickliffe, Ohio
Cleveland Punch & Shear Works Co., E. 40th and St. Clair Ave., Cleveland 14, Ohio
Clough Machine & Small Tool Co., Barre Plains, Mass.
Coast Pneumatic Tool Co., Los Angeles, Calif.
Columbia Machinery & Eng. Co., High and Thomas Sts., Hamilton, Ohio
Commonwealth Co., 2127 W. Commonwealth Ave., Alhambra, Calif.
Compton Shear Co., W. H., 314 Camden St., Newark 3, N. J.
Connors & Davis Sales Corp., Circuit Ave., West Springfield, Mass.
Corbman Bros., Inc., 315 No. 7th St., Philadelphia 6, Pa.
Crandall Mfg. Co., 1512 W. Slauson, Los Angeles 44, Calif.
Crescent Tool Co., 200 Harrison, Jamestown, N. Y.
Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
Cummins Portable Tools Div., Cummins—Chicago Corp., 4740 No. Ravenswood, Chicago, Ill.
Cuyahoga Spring Co., 10254 Berea Rd., Cleveland 2, Ohio

—D—

Dahlstrom Machine Works, Inc., 4227 W. Belmont Ave., Chicago 41, Ill.
Damascus Steel Prods. Corp., 2215 Kishwaukee St., Rockford, Ill.
Davis & Son Machine Works, 8426 Compton Ave. S., Los Angeles 1, Calif.
Delta Mfg. Div., Rockwell Mfg. Co., 620 E. Vienna Ave., Milwaukee 3, Wisc.
Delta Power Tool Div., Rockwell Mfg. Co., 400 No. Lexington Ave., Pittsburgh, Pa.
Densewood Corp., Elkhorn, Wisc.
Detroit Hoist & Machine Co., 8202 Morrow St., Detroit 11, Mich.
Devices, Inc., 214 E. 53d St., New York, N. Y.
DeVilbiss Co., The, 300 Phillips Ave., Toledo 1, Ohio
DeWalt, Inc., 949 Fountain Ave., Lancaster, Pa.
Diamond Expansion Bolt Co., Inc., 500 North Ave., Garwood, N. J.
Diamond American Corp., 624 So. Michigan Ave., Chicago, Ill.
Diamond Machine Tool Co., 5111 Coffman-Pico Road, Pico, Calif.
Disston & Sons, Inc., Henry, Unruh & Milnor, Philadelphia 25, Pa.
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Downs-Smith Brass & Copper Co., Inc., 304-320 E. 45th St., New York 17, N. Y.
Dreis Co., Ltd., Edward J., 841 County Rd., San Carlos, Calif.
Dreis & Krump Mfg. Co., 7400 So. Loomis Blvd., Chicago 36, Ill.
Dremel Mfg. Co., 2420 18th, Racine, Wisc.

—E—

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Eisler Eng. Co., 761 So. 13th St., Newark 3, N. J.
Electric Arc, Inc., 152 Jeliff Ave., Newark 8, N. J.
Electro Dustless Painting, Inc., 1052 New Britain Ave., Elmwood 10, Conn.
Electro Lift, Inc., 32 Church St., New York 7, N. Y.
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Excelsion Tool & Machine Co., 31st and Ridge Ave., East St. Louis, Ill.
Expert Welding Machine Co., 17144 Mt. Elliott St., Detroit, Mich.

—F—

Fairmount Tool & Forging Co., 10611 Quincy Ave., Cleveland 6, Ohio
Fallsington Mfg. Co., Fallsington, Pa.
Famco Machine Co., 1340 18th St., Racine, Wisc.
Famco Machine Co., 6420 Woodland Ave., Cleveland 4, Ohio
Farquhar Furnace Co., 230 Owens Ave., Wilmington, Ohio
Federal Machine & Welder Co., Overland Ave., Warren, Ohio
Federal Machinery Co., 134 Grand St., New York 13, N. Y.
Felters Co., Inc., 210 South St., Boston 11, Mass.
Fenway Machine Sales Co., Inc., 263 No. 23d St., Philadelphia 3, Pa.
Fern, Ralph, 2517 Boulevard Ave., Scranton 9, Pa.
Flagler Corp., The, 19321 Filer Ave., Detroit, Mich.
Flexible Tubing Corp., Guilford, Conn.
Flexonics Corp., 1315 So. Third Ave., Maywood, Ill.
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa.
Fox Noiseless Hammer Co., 77 Green Hill Rd., Media, Pa.

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Gas Arc Supply, 223 No. 16th St., Philadelphia 2, Pa.
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General Electric Co., 1 River Rd., Schenectady, N. Y.
General Electric Co., Carboloy Dept., 1117 E. Eight Mill Rd., Detroit 32, Mich.
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Gerrard & Co., A. J., 1950 Hawthorne Ave., Melrose Park, Ill.
Glass Fibers, Inc., 1808 Madison Ave., Toledo 2, Ohio
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Gouran, Mark F., 7309 Boyer St., Philadelphia 19, Pa.
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Grant Wilson, Inc., 141 W. Jackson Blvd., Chicago 4, Ill.
Gray Machine Co., Philadelphia, Pa.
Greene, Tweed & Co., New York, N. Y.
Greenlee Tool Co., 2136 12, Rockford, Ill.
Grob Bros., Grafton, Wisc.

—H—

H. A. Mfg. Co., 1612 W. King St., York, Pa.
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Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.
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Interstate Drop Forge Co., 4051 No. 27th St., Milwaukee, Wisc.
Interstate Sales Co., 123 E. 18th St., New York 3, N. Y.

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Jefferson Machine Tool Co., Fourth, Cutter & Sweeney, Cincinnati 3, Ohio
Jefferson Eng. & Mfg. Co., Walker at Franklin, Detroit, Mich.
Johnson, Inc., William, Brenner & Kent St., Newark 3, N. J.
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Johnson Machine & Press Corp., 620 W. Indiana Ave., Elkhart, Ind.

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Kane & Roach, Inc., Shonnard and Holland, Syracuse 4, N. Y.
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Keller Tool Co., P. O. Box 268, Grand Haven, Mich.
Kenco Mfg. Co., 5211 Telegraph Rd., Los Angeles 22, Calif.
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Kern Co., John A., 224 No. Loomis, Chicago, Ill.
Kett Tool Co., The, 5 E. 3rd St., Cincinnati 2, Ohio
Kidder Mfg. Co., J. F., 416 Colchester Ave., Burlington, Vt.
Kirstein Specialties, Rochester 8, N. Y.
Klenk Aviation Snips, Karl, 107 E. Fifth St., Wilmington, Del.
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Knights Co., James, Sandwich, Ill.
Kraus, Charles E., 122 So. 8th St., Louisville 2, Ky.
Kretz Co., Adolph, 1249 W. School St., Chicago, Ill.

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Lane Shur-Grip Tool Co., 1420 So. Michigan Ave., Chicago 6, Ill.
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Lee Co., K. O., Congress at 1st, Aberdeen, S. D.
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Lincoln Machine Co., Livermore Falls, Me.
Lincoln Machine Co., Boston, Mass.
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Lockformer Co., The, 4609 W. Roosevelt Rd., Chicago 50, Ill.
Louden Machinery Co., Fairfield, Iowa
Lufkin Rule Co., The, Hess St., Saginaw, Mich.
Lug-All Co., The, Wynnewood, Pa.
Lyon Metal Prods., Inc., 740 Madison Ave., Aurora, Ill.

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Mall Tool Co., 7740 So. Chicago Ave., Chicago 19, Ill.
Manco Manufacturing Co., The, Bradley, Ill.
Maplewood Machinery Co., 2634-38 Fullerton Ave., Chicago 47, Ill.
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Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
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Melaway Corp., Box 248, Brandon, Wisc.
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Merchandising & Mfg. Associates, Inc., 53 No. Duke St., Lancaster, Pa.
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Miller Electric Mfg. Co., Inc., 718 So. Bounds St., Appleton, Wisc.
Milton Eqpt. Co., N. E. Cor. 4th & Race Sts., Philadelphia 6, Pa.
Miller Rubber Co., Akron, Ohio

Milwaukee Electric Tool Corp., 5374 W. State St., Milwaukee 8, Wisc.
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
Misener Mfg. Co., Inc., 202-8 Walton St., Syracuse 2, N. Y.
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Mueller Brass Co., Ft. Huron, Mich.
Munton Mfg. Co., 9400 Belmont Ave., Franklin Park, Ill.
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—N—

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Plummer Spray Eqpt. Co., 700 Filmore St., Napoleon, Ohio
Poe, Ralph W., 306 W. Locust St., Canton, Ill.
Polis Mfg. Co., J. D., 2900 W. 26th St., Chicago, Ill.
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Precision Eqpt. Co., 3714 No. Milwaukee, Chicago 39, Ill.
Precision Welder Mfg. Co., 660 W. Grand Ave., Chicago, Ill.
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Price, Hedrick & Tanner, 1105 So. Jefferson, Saginaw, Mich.
Progressive Welder Co., Detroit 12, Mich.
Progressive Welder Sales Co., 3070 E. Outer Dr., Detroit 34, Mich.

—Q—

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—R—

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—S—

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Smith, R. E., 1513 Monroe St., Waukegan, Ill.
Smith & Son, Inc., Seymour, Box 591, Oakville, Conn.
Smith Welding Eqpt. Corp., 2633 Fourth St., S. E., Minneapolis 14, Minn.
Snap-On Tools Corp., Kenosha, Wisc.
Snyder Co., S. F., Gettysburg, Pa.
South Div., South Chester Corp., Finance Bldg., Philadelphia 2, Pa.
Southwest Mfg. Co., P. O. Box 1615, Santa Ana, Calif.
Speedway Mfg. Co., 1834 So. 52d Ave., Cicero 50, Ill.
Spotweld Co., 3762 Ridge Rd., Cleveland, Ohio
Spray Eng. Co., 114 Central St., Somerville 45, Mass.
Stamco, Inc., New Bremen, Ohio
Standard Power Groove Machine Corp., 99 Hudson St., New York 13, N. Y.
Stanley Electric Tools, 442 Myrtle St., New Britain, Conn.
Star Expansion Bolt Co., 147 Cedar St., New York 6, N. Y.
Star Stainless Screw Co., 195 Union Ave., Paterson, N. J.
Stephens-Adamson Mfg. Co., Ridgeway Ave., Aurora, Ill.
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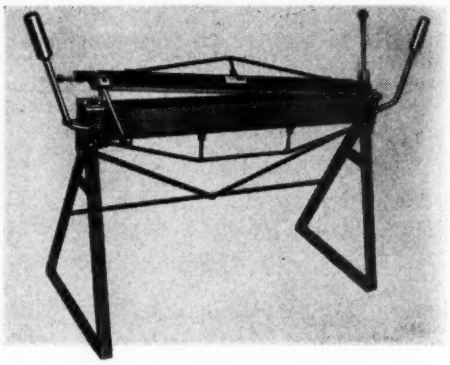

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Swaine Mfg. Co., Fred J., 1300 No. Seventh St., St. Louis 6, Mo.
Swift Electric Welder Co., 8095 Livernois Ave., Detroit 4, Mich.
Syntron Co., 271 Lexington, Homer City, Pa.

—T—

Tannewitz Works, 315 Front Ave., N. W., Grand Rapids 2, Mich.
Taylor-Hall Welding Corp., Worcester, Mass.
Taylor-Winfield Corp., 1052 Mahoning Ave., N. W., Warren, Ohio
Technical Processes Div., Colonial Alloys Co., Ridge Ave. & Crawford St., Philadelphia 29, Pa.
Tempo Prods. Co., 2075 E. 65th St., Cleveland 3, Ohio
Termite Drills, Inc., 99 No. Lotus St., Pasadena 8, Calif.
Thomas Co., Burgess, Bloomfield, N. J.
Thomas-Gibb Electric Welding Co., Lynn, Mass.
Thomas Machine Mfg. Co., Butler Rd., Pittsburgh 23, Pa.
Thomson Electric Welder Co., 161 Pleasant St., Lynn, Mass.
Thor Tool & Die Co., 865 Estabrook St., San Leandro, Calif.
Tiffin Art Metal Co., The, Tiffin, Ohio
Time Saver Tools, Inc., Mundelein, Ill.
Tinit Mfg. Co., Inc., 1635-53 Platte St., Denver 2, Colo.
Tinnerman Prods., Inc., P. O. Box 6688, Cleveland 1, Ohio
Toledo Pipe Threading Machine Co., 1445 Summit St., Toledo 4, Ohio
Topflight Tool Co., 116 E. Market St., York, Pa.
Transa, Inc., Minneapolis, Minn.
Trindl Prods., Ltd., 17 E. 23d St., Chicago 16, Ill.
Tri-Saw Corp., 6611 Clayton Rd., St. Louis 17, Mo.
Turner Brass Works, The, 821 Park Ave., Sycamore, Ill.
Tweco Prods. Co., English at Ida, Wichita 1, Kans.

—U—

United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.
U. S. Electrical Motors, Inc., 200 E. Salauson Ave., Los Angeles 54, Calif.
U. S. Electrical Tool Div., Emerson Electric Mfg. Co., The, 8100 Florissant Ave., St. Louis 21, Mo.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
United Wire & Supply Corp., 1497 Elmwood Ave., Providence 7, R. I.
Universal Prods. Co., San Francisco, Calif.
Universal Welder Corp., 735 Carnegie Ave., Cleveland 15, Ohio

—V—

Valley Electric Co., 4221 Forest Park, St. Louis, Mo.
Van Dorn Electrical Tool Co., Towson 4, Md.
Van Prods. Co., 3734-97 W. 12th St., Erie, Pa.
Velocity Power Tool Co., 201 No. Braddock Ave., Pittsburgh 24, Pa.
Verson Allsteel Press Co., 9300 So. Kenwood Ave., Chicago 19, Ill.
Victor Eqpt. Co., 844 Folsom St., San Francisco 7, Calif.
Viking Shear Co., 1065 W. 20th St., Erie, Pa.
Vinco Prods., 326 Bond St., Asbury Park, N. J.
Vital Prods. Mfg. Co., 7500 Quincy Ave., Cleveland 4, Ohio
Vulcan Electric Co., 88 Holten St., Danvers, Mass.
Vyke Brake Co., 1118 So. 27th St., Omaha 5, Nebr.

—W—

Wagner Awning & Mfg. Co., 2658 Scranton Rd., Cleveland 1, Ohio
Wales-Strippit Corp., 345 Payne Ave., North Tonawanda, N. Y.
Wall Colmonoy Corp., 19345 John R St., Detroit 3, Mich.
Ward Machinery Co., 564 W. Washington Blvd., Chicago 6, Ill.
Warner Oberly Mfg. & Sales Co., 2316 Wyoming Ave., Grand Rapids, Mich.
Warren Handle Works, Cortland, Ohio
Washington Steel Corp., Washington, Pa.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., 113-5 Mercer St., New York 12, N. Y.
Weldex, Inc., 2200 W. Fort St., Detroit 16, Mich.
Welding Machines Mfg. Co., 17325 Lamont Ave., Detroit 12, Mich.
Welding Sales & Eng. Co., 8750 Grinnell Ave., Detroit 13, Mich.
Weiger Weed & Co., Div. Fansteel Metallurgical Corp., 11644 Cloverdale Ave., Detroit 4, Mich.
Wells Mfg. Corp., 1818 Wilson Ave., Three Rivers, Mich.
Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.
Wheelock Co., Geo. F., The, 3017 So. Second Ave., Birmingham 5, Ala.
Whipple Sheet Metal Works, M. S. & L. H., 913 E. Shiwassee, Lansing 12, Mich.
Whiting Corp., 15613 Lathrop Ave., Harvey, Ill.
Whitney Mfg. Co., W. A., 636 Race St., Rockford, Ill.
Whitney Metal Tool Co., 91 Forbes St., Rockford, Ill.
Wiedmann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.
Wilder Mfg. Co., Inc., P. O. Box 1925, Carmel, Calif.
Williams-White & Co., Moline, Ill.
Will-Weld Mfg. Co., Inc., 1523 Marcy St., Omaha 2, Neb.
Wilson, K. R., 215 Main St., Buffalo 3, N. Y.
Wiremold Co., Hartford 10, Conn.
Wiss & Sons Co., J., 31 Littleton Ave., Newark 7, N. J.
Wodack Electric Tool Corp., 4627 W. Huron St., Chicago 44, Ill.
Wolff & Co., Benjamin, 1945 No. Cornell Ave., Melrose Pk., Ill.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.
Wysong & Miles Co., 625 Fulton St., Greensboro, N. C.
Wyzenbeek & Staff, Inc., 223 No. California Ave., Chicago, Ill.

—Y—

Yale & Towne Mfg. Co., The, Yale Materials Handling Div., Philadelphia 15, Pa.
Yoder Co., 5500 Walworth Ave., Cleveland 2, Ohio
York Electric Machine Co., 630 Loucks Mill Rd., York, Pa.
York Electric & Machine Co., 30-34 No. Penn St., York, Pa.
Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown 1, Ohio

—Z—

Zeh & Hahnemann Co., 182-200 Vanderpool St., Newark 5, N. J.

New Products

General Electric Line includes nine new home heating Controls

G. E.'s line of simplified home heating controls includes nine devices: a room thermostat, master control, flame detector and master control, transformer relay, fan and limit control, temperature limit control, water immersion temperature control and a steam pressure control. All are designed for fast, easy installation, may be mounted in any position without leveling and feature removable covers.

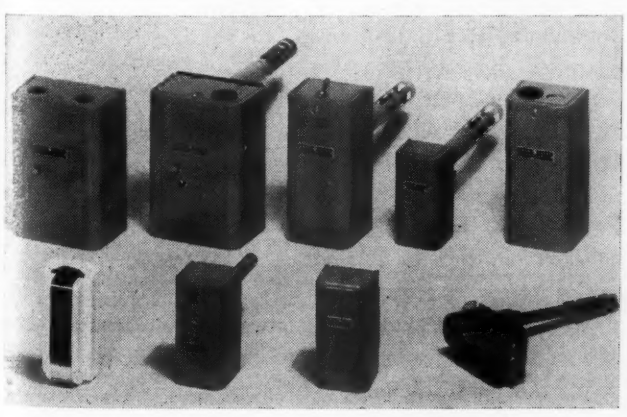
The thermostat can be calibrated without tools and has a comfort dial with which the homeowner can adjust the time cycle. Addition of an ordinary radio resistor and time-switch clock converts the unit to a day-night thermostat.

The stack-mounted master control with bimetallic helix needs no adjustments or leveling and is machine-calibrated in a dust-proof enclosure.

If oilburner flames fail the flame detector shuts off the burner in 4 to 7 secs. The detector has a nichrome and quartz detector rod sensitive to 30° temperature changes. The control can be mounted almost any place, including the stack or combustion chamber. Companion to the flame detector is the master control, mountable on the side of the furnace or on the gun burner.

A two-purpose control is the transformer relay. It operates a line-voltage load from a low-voltage thermostat or other control. Two extra terminals allow for the operation of an additional low-voltage circuit.

Warm air furnaces are protected against excessive bonnet temperatures with the fan and limit control, which also



SILENT KORTH

SILENT KORTH OIL HEAT

The Service Free Burner

The profits are yours—TO KEEP—when you sell and install Quality Deluxe Silent Korth oil burners. Dependable performance eliminates costly service calls. Service-free Korth saves you time, protects your profits, invites recommendation business.

MODEL SR
(available in 2 sizes)
.75 to 3.0 G.P.H.

MODEL T
(available in 4 sizes)
.75 to 20.0 G.P.H.

QUALITY
Standard Specifications

GENERAL ELECTRIC or OHIO Motor with Thermal Overload. SUNDSTRAND Fuel UNIT. JEFFERSON Ignition Transformer. MINNEAPOLIS-HONEYWELL Controls—Thermostat, Relay, Plain Limit. ONE PIECE CAST HOUSINGS: Motor & Pump Bores Machined for accurate alignment. LOVEJOY 3-PIECE FLEXIBLE COUPLING Connecting Motor & Fuel Unit for quiet operation. All the way thru—SILENT KORTH is built for outstanding performance!

Get More REPLACEMENT BUSINESS

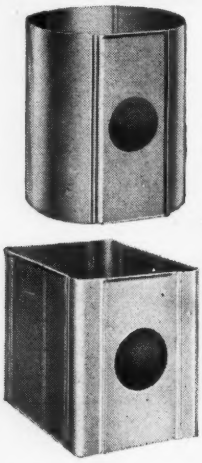
Write for FREE colorful envelope stuffers, literature, specification sheets. 16" window and truck decals and newspaper mats.

JOBBERS Protected on Dealer Sales. Write for new Net Prices.

SILENT KORTH OIL BURNERS & PARTS ARE SOLD ONLY THRU JOBBERS & DEALERS

ECKHART MFG. CO., INC.
UNION, NEW JERSEY

For Oil Conversions



your best bet is

PANELOX®

Heat-Resisting Stainless Steel

Combustion Chambers

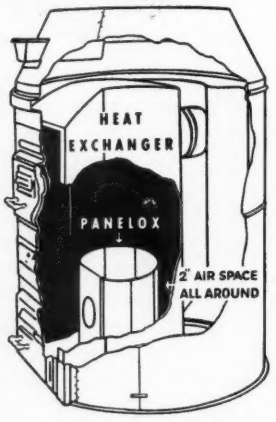
In every way, Panelox combustion chambers are your best bet for conversion from coal to oil. They greatly increase heating area of the heat exchanger; provide faster heat transfer; eliminate override for more uniform control; save fuel.

Panelox chambers are easy to install—interlocking panels slide together without tools. They save freight—weigh just a fraction of other types. No breakage in shipment or handling. Easy to stock—panels nest together in compact cartons. Sizes for every shape of installation.

NOTE: Proper installation is important. Old refractory or fire brick must be removed. There must be absolutely no insulation or backfill between Panelox chamber and heat exchanger or furnace casing. At least 2″ space must be allowed between chamber and heat exchanger.

Interlocking panels—quadruple thick at seams for extra strength and rigidity.

Individual panels slide together to fit a wide range of chamber dimensions.



Heat from Panelox is absorbed directly into walls of heat exchanger for fast heat transfer, maximum efficiency.

Write today for full details, sizes, prices!

STEFCO STEEL COMPANY

Heating Equipment Div. • Michigan City, Ind.

has a summer switch for fan cooling. Fan-on settings are possible between 100° and 200° and a limit scale sets anywhere between 130° and 250°. A mechanical interlock prevents wrong settings. Also for warm air furnaces is the temperature limit control, with removable stops at 200°, 250° and 300°.

The water immersion temperature control for hot water systems features a dry well to protect the helix and an adjustment setting slot which protrudes through the cover and can be turned with a coin. The steam pressure control, available for standard male and female compression fittings in any range of pressures and various types of steam operation, is adjusted for range and differential by turning acorn nuts.

Made by: General Electric Co., Appliance Control Dept., Morrison, Ill.

McDonnell adds two larger Sizes of No. 230 pressure relief Valves

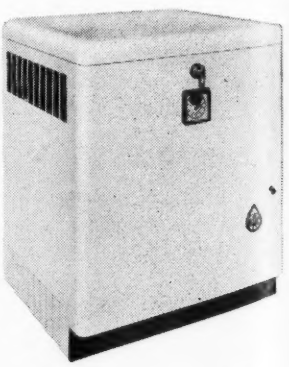
TWO NEW, LARGER SIZE pressure relief valves for hot water space heating boilers have been added by McDonnell & Miller to its No. 230 lines. The new sizes are catalogued the 1″ No. 230 and the 1½″ No. 230, the former for boilers with heat output to 743,400 Btu/hr, the latter for boilers up to 1,025,100 Btu/hr outputs. The original ¾″ No. 230 has a capacity of 303,000 Btu/hr. All valves open at 30 lbs. pressure.

These ASME valves have been tested and certified by the National Board of Boiler and Pressure Vessel Inspectors and feature non-corrosive operating parts. The valve seat is brass; high temperature silicone is used for the valve disc. All are tamper-proof with pressure settings established at the factory. Each one can be easily disassembled and even if the valve's independent-action testing lever is tied down it cannot interfere with its automatic operation.

Made by: McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

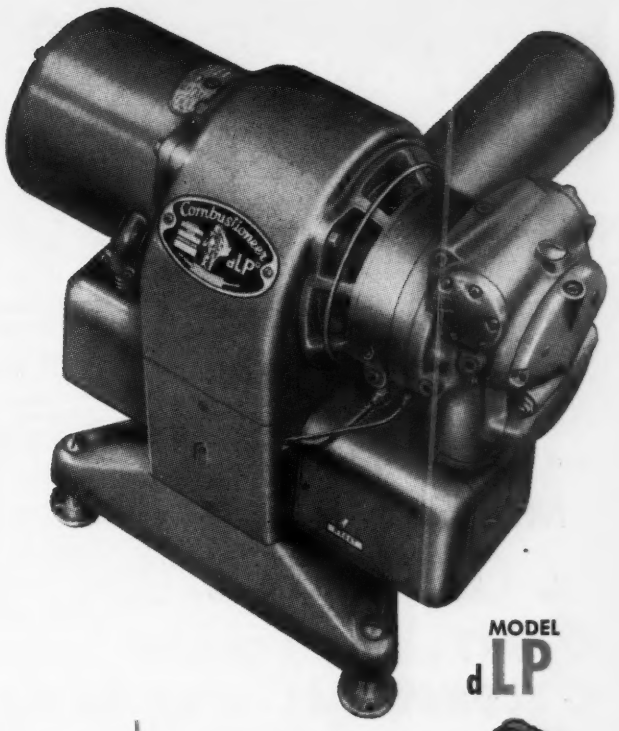
National Packet Model "K" is oilfired Unit for small Homes

NATIONAL PACKET model "K" has been announced as an oilfired, factory-assembled, boiler-burner unit for forced circulation hot water heating in small homes, motels, cottages or other structures with a minimum heating load and restrained domestic hot water demand. The ASME unit has a gross output of 99,000 Btu, firing rate of 1 gph, 16 sq. ft. of heating surface. Its net rating, based on 150 Btu per sq. ft. heat omission is 440 sq. ft. of water radiation, SBI.

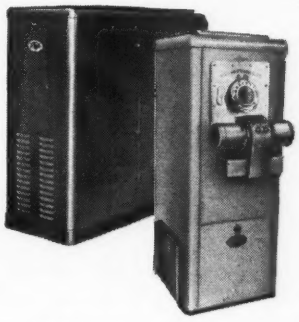


Shipped complete with insulation, combustion chamber, 3 gpm tankless water heater, oilburner, controls and accessories in place, the unit features a Raytrol control system.

"Mr. Dealer";
Here's the LOW PRESSURE OIL BURNER
designed for you . . .

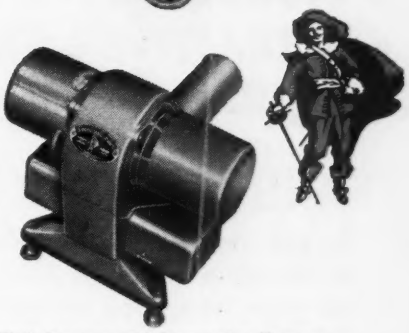


MODEL dLP

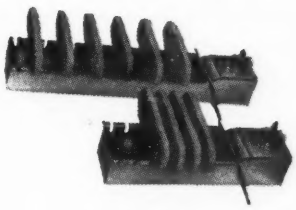


Oil Furnaces

Gas Furnaces



High Pressure Oil Conversion Burner



Humidifiers

Combustioneer is better, because **Combustioneer** is the *ONLY* Low Pressure Oil Burner on which both primary and secondary air and oil capacity adjustments can be made to cover .5 to 4.0 G.P.H. *while the burner is operating!*

ANOTHER Combustioneer EXCLUSIVE

The proven two-stage Hydra-Vated fuel pump with self purging reservoir . . . one pump operates in suction only, the other produces pressure to operate metering piston and shut-off valves. Draws oil vertically up to **15** feet, plus up to **38** feet horizontally, from buried tank, and without extra lift pump.

STRONG NATIONAL ADVERTISING

Combustioneer Dealers get plenty of HELP! Powerful advertisements in national magazines help sell YOUR prospects on the many EXCLUSIVE **Combustioneer** features. You spend less time convincing prospects, more selling to customers.

"Better Heating Since 1928"

DEALER AIDS

Window streamers and complete displays, outdoor identifications, varied direct-mail material, newspaper mats, radio and television scripts, sales and service training. Dealers' local advertising is handled on a coop basis as to cost . . . permitting **Combustioneer** Dealers to do more advertising.

DEALER TERRITORIES OPEN!

Yes, YOU can enjoy ALL the benefits of **Combustioneer** advertising and dealer aids in YOUR community. YOU, too, can make more sales . . . and more profits with **Combustioneer!**

Mail Coupon for Franchise Details!

Combustioneer DIVISION
The Steel Products Engineering Company,
1302 W. Columbia Street, Springfield, Ohio

Please send me complete **Combustioneer** advertising, dealer aids and dealer franchise information. There's NO obligation!

NAME_____

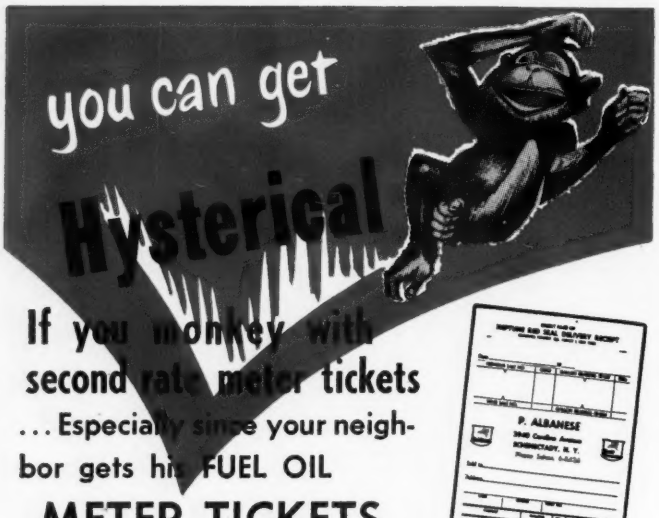
FIRM NAME_____

STREET ADDRESS_____

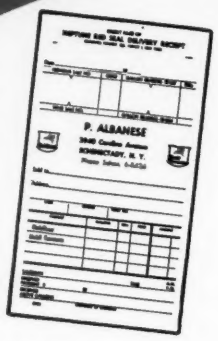
CITY_____ ZONE_____ STATE_____

Combustioneer

Low and High Pressure Oil Burners • Gas Burners • Oil-Gas-Coal Furnaces • Stokers • Humidifiers
Division, The Steel Products Engineering Company, Springfield, Ohio



If you monkey with second rate meter tickets ... Especially since your neighbor gets his FUEL OIL



METER TICKETS *the* CROMWELL *way*

✓ **FAST** – 30 DAYS OR LESS!
✓ **ECONOMICAL** – A BOTTOM PRICE!
✓ **ATTRACTIVE** – IN TWO COLORS!
✓ **STURDY** – WEATHER-PROOF CARBON!

AND THAT'S NOT ALL!

To get the full CROMWELL story on this outstanding FUEL OIL METER TICKET ask for your free copy of our 20 page Fuel Oil Catalog

But .... For fast action in one week, order our attention – getting

WINDOW ENVELOPE with a message,

1000	2000	5000
$9.50	$17.50	$37.50

Thank You!
It has been a pleasure for us to serve you and we appreciate the confidence placed in us. May we look forward to the privilege of serving you again.
YOUR NAME OIL COMPANY
TELEPHONE 1234
123 MAIN STREET
ANYTOWN, U.S.A.

or for BLOTTERS to create good will,

1000	2000	5000
$13.50	$22.50	$44.00

or for EMERGENCY and CAUTION SIGNS

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or anything and everything the FUEL OIL DEALER needs . . . . write

CROMWELL PRINTERY, INC.

FUEL OIL DEPARTMENT – T G

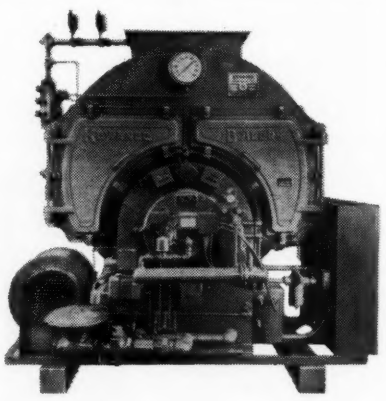
61 HUDSON AVENUE ALBANY 1, NEW YORK

This is intended to assure adequate heated hot water from the tankless heater, maintain a predetermined maximum temperature in the radiation, modulate water temperature in the heating system to prevent over or underheating and minimize expansion and contraction noises in piping and radiation. Over-all height is 31 in., width is 30 in. and depth, 26 in. An enclosing white enameled cabinet, with front access panel, is shipped separately for this kitchen counter height unit.

Made by: National Radiator Co., 221 Central Ave., Johnstown, Pa.

Kewanee-Ray boiler-burner Unit for steam or hot water Heating

KEWANEE-RAY boiler-burner is being manufactured for high pressure steam to produce 39 to 456 certified boiler output horsepower at 125 and 150 lb. wp., for low pressure 15 lb. steam or 30 lb. water in sizes to produce 1,313,000 to 15,300,000 Btu/hr. The unit is designed for forced draft operation, a multi-stage secondary air control on the burner providing a constant velocity type air stream to the combustion zone.

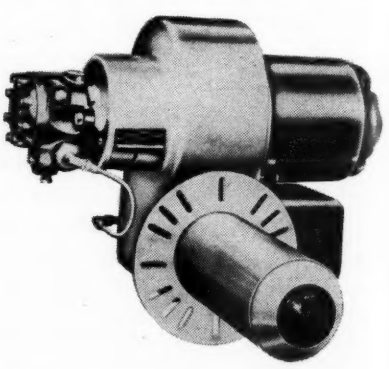


The boiler, complete with controls, piping and accessories, is assembled and shipped from the Kewanee plant. The burner, with its built-in forced draft, fan and windbox controls and accessories, arrives in a separate shipment from the Ray factory.

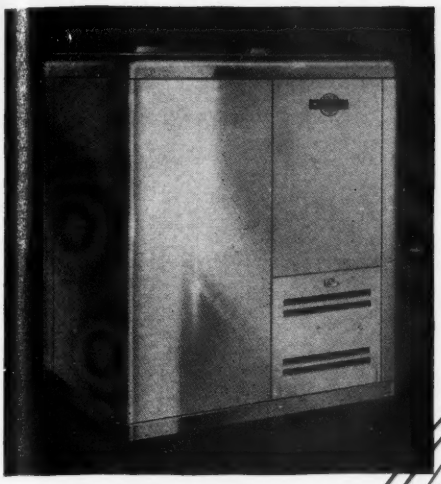
Made by: Kewanee-Ross Corp., Kewanee, Ill. and Ray Oil Burner Co., San Francisco, Calif.

Carlin expands Line with flange-mounted gun Burner

MODEL 400 AF flange-mounted gun burner has been added to the Carlin line. The burner, especially designed to keep pulsation at a minimum, incorporates advanced engineering features and is available also in the 400A pedestal mounted with 4" adjustment for standard type installations.



The flange-mounted model is adaptable to water heaters, boiler and furnace-burner units and features an adjustable air de-



THINKS for itself...

SELLS itself...

WILLIAMSON
HEATER COMPANY

AMERICAN GAS ASSOCIATION · APPROVED · COMPLIES WITH NATIONAL SAFETY REQUIREMENTS

Gasaver De Luxe
GAS FURNACE

Automatic firing revolutionized the heating industry. Now, WILLIAMSON offers you the first major advance since automatic firing . . . automatic firing PLUS automatic modulation of both fuel consumption and warm air circulation — *twice* the comfort at *twice* the economy!

During cold weather the GASAVER operates at full capacity. When the weather turns mild (like it is 70-90% of the heating season), an outside thermostat automatically switches the Twin-Temp Burner and 2-speed blower to ½ capacity.

As a result, the GASAVER eliminates overrun . . . reduces flue losses . . . cuts gas and electric costs . . . provides balanced heat for *every* room in the house. The GASAVER thinks for itself . . . and SELLS ITSELF!

The GASAVER means big profits for you because it is *really* new . . . *truly* revolutionary. It offers customers benefits that they never before could buy . . . actually *2 furnaces for the price of one.* Write TODAY for complete details on the revolutionary GASAVER Furnace!

THE WILLIAMSON HEATER CO.
3530 Madison Road **Cincinnati 9, Ohio**

SMALL.. WALKER Junior Fuel Saver Automatic Draft Regulators come in four types—engineered for use with space heaters, circulators, water heaters, trailer stoves and all other heating equipment within that range.

There's a
WALKER
Fuel Saver
AUTOMATIC DRAFT REGULATOR
for Every Heating Application

LARGE...
The Ball Bearing Type WALKER Industrial Fuel Saver is available in 16" to 48" sizes . . . for applications in schools, office buildings, apartments, stores and manufacturing plants.

AND IN BETWEEN

There are two types of WALKER Domestic Fuel Savers to meet draft control requirements of central heating plants in homes, apartments, and multiple housing projects.

Only WALKER Makes a Complete Range of Sizes of Automatic DRAFT REGULATORS

WALKER Automatic DRAFT REGULATORS

● Whether for trailer stoves or for industrial boilers serving the nation's largest housing project—the *right* Walker Fuel-Saver Automatic Draft Regulator can be selected from stock. Twelve Million sales...thousands of successful applications throughout the range of heating...speak for themselves...give proof of Walker design, craftsmanship and engineering. You can be sure that there is a Walker Fuel-Saver ready for any application you may have.

SEND FOR CATALOG

Twenty pages show all types, sizes in full line. Applications and installations described. A valuable handbook FREE, if you write . . .

CHECK THESE 9 POINTS

1. **EASE OF ADJUSTMENT** with exclusive patented pointer and calibrated dial.
2. **BOX TYPE HINGES** with sealed protection against corrosion, dirt and dust.
3. **BALANCE PLATE**—scientifically designed to maintain proper balance.
4. **SPECIFIC PIPE SIZES** — insure correct capacity for every type of installation.
5. **ALUMINUM FRAME**—rigid, long lasting.
6. **EASE OF INSTALLATION**—collar and stub for quick attachment.
7. **ARMCO ALUMINIZED STEEL**—for heat and corrosion resistance.
8. **FACTORY SET** — for "performance as perfect as possible."
9. **FREE FLOW** of air in unrestricted inside area.

NEW WALKER VENTURI-TOP CHIMNEY CAP
is winning approval on more and more installations. Proved to be ideal in design and construction to correct insufficient draft and stop down draft . . . and to solve ventilating problems. Sizes from 3" to 8" ready for immediate delivery.

WALKER MANUFACTURING & SALES CORP.
1750 PENN. ST. ST. JOSEPH, MO.

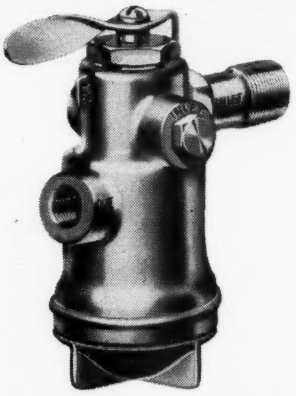
flector baffle to insure a thorough mixing of the air and oil. The deflector also provides positive positioning of fire from the end of the air cone.

The complete line of U. S. oilburners ranges in capacity from 0.5 to 20.0 gph.

Made by: The Carlin Co., Wethersfield, Conn.

Unifilter is combination Assembly of Filter-Valve for fueloil Tanks

UNIFILTER "75" is a compact fueloil filter and 4-way control valve assembly, designed to connect 1, 2 or 3 storage tanks to one or more gravity type burners. The entire unit is installed by screwing the externally-threaded ½" main inlet into the outlet hole of the center tank. Two additional inlets contain ¼" standard pipe threads and can be connected at either side with copper tubing or iron pipe; if not needed they are plugged. A threaded outlet connecting directly to the fuel line supplies clean oil to the burner. Unifilter "75" measures 3⅞" x 4½".

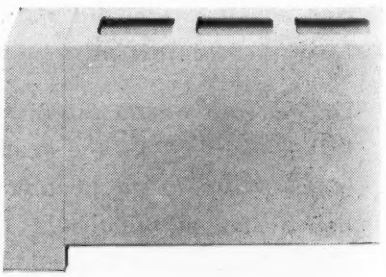


Fuel is drawn by turning the valve handle to any one of the three inlets. When one is opened, the other two are tightly sealed. A positive "off" position stops all fuel at the filter, so that separate cocks are not necessary. Other features include the washable Monel 100-mesh wire screen cartridge, removable without tools; built-in water trap located at the bottom of the filter body and self-venting design, which prevents formation of air pockets in the filtering area and automatically vents the air back into the storage tank.

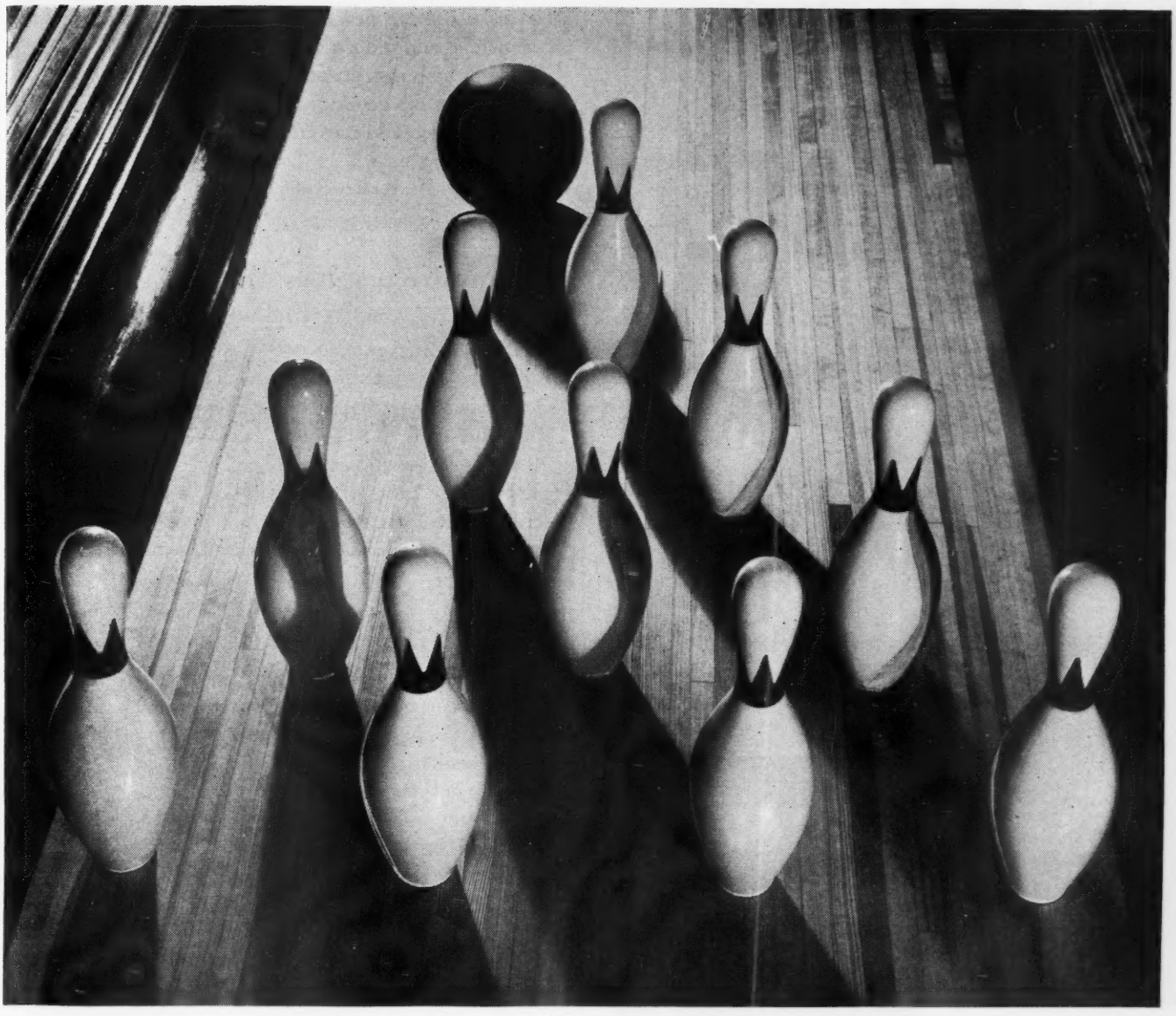
Made by: General Filters, Inc., for Unifilter Co., 29845 West 13 Mile Rd., Farmington, Mich.

Koven Trimrad baseboard Radiators for Homes and industrial Uses

KOVEN TRIMRAD baseboard radiators have been designed to deliver uniform heating, 50% by radiation and 50% by convection. Three large hot water water-ways back the entire front panel and hold 1.1 qts. of water per linear ft. Trimrad's all welded steel construction permits quicker heat transfer and the use of mill rolled stock results in smoother surfaces for more effective radiation.



Installation can be made for standard or recessed mounting. The units weigh 5 lbs. per linear ft. and are intended



A perfect set-up!

When you team up with Perfection you can set your business sights straight down the alley without any worries about competition from the factory or cut-rate, back-door operators. We respect your right to do business in your own way, in your own territory.

You'll find it's easier to sell Perfection home heating and cooling equipment, too. That's because Perfection offers you the only *real* exclusives in the business today. The famous Regulaire* control and the fuel-saving 3-stage fire, plus ten-year guarantee, are sure to help you close more sales.

And when you're on the Perfection team you benefit from the solid stability that comes from 65 years of doing business. If you're interested in a perfect set-up like this, we're always looking for smart and aggressive jobbers and dealers. Write Perfection Stove Company, 7398-E, Platt Avenue, Cleveland, Ohio.

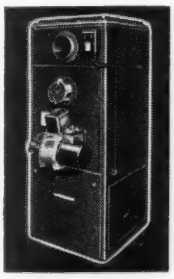
Perfection's 3 point platform for dealers

Completely New!

LO-HI-BOY Model F-605 Oil-fired furnace.

Less than 61 inches high. Easily converted to gas. Gun-type burner. Matching Summer Cooling Unit.

*Patents Pending

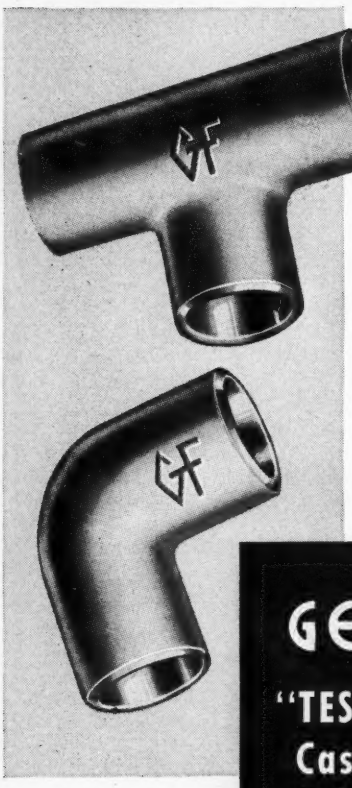


Fueloil & oilheat

65 YEARS OF FINE PRODUCTS

Perfection

100% INSPECTED



...yet they cost no more!

GENERAL
"TESTITE"
Cast Bronze
Solder Fittings

The GENERAL trade-mark on cast bronze solder fittings is your assurance that they are "Testite" . . . the highest quality fittings you can buy . . . air-under-water tested for perfect performance.

Yet, you pay no more for this premium quality . . . and here's why: GENERAL'S modern manufacturing methods, incorporating many automatic operations, keep costs down. You get fittings that reduce turbulence, and have accurately machined sockets for precise fits and easy soldering . . . all for the same price as "ordinary" solder fittings. And . . . "Testite" Fittings are available now for immediate shipment. Order today, or write for detailed folder. General Fittings Co., 125 Georgia Ave., Providence 5, R. I.

GENERAL GF

TANKLESS AND INDIRECT WATER HEATERS
AND HEATING SPECIALTIES

for installation in new or remodeled homes and for many commercial and industrial applications.

Step-by-step instruction accompany each baseboard and the company has developed a pocket calculator which helps figure radiation and converts the result into the Btu output required.

Made by: Waterfilm Boilers, Inc., 36-40 New York Ave., Jersey City 7, N. J.

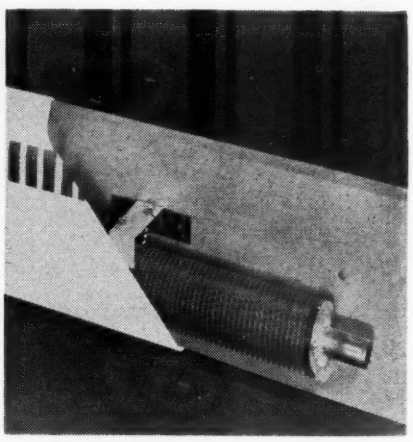
Hydrovalve develops Tools for servicing and testing Controls

NEW OILBURNER SERVICE TOOLS, manufactured by Hydrovalve Co., are listed in its new catalog, No. F-7. These tools are especially designed for servicing and testing controls, fuel units, valves, nozzles and electrodes. More than 20 such tools have been developed by the Hydrovalve people for these uses, all of which can be illustrated and described in its catalog.

Made by: Hydrovalve Co., 1310 Utical Ave., Brooklyn, N. Y.

Aqua-Air Baseboards added to York Line

A COMPLETE LINE of baseboard heating convectors under the trade name of Aqua-Ray has been announced by York-Shipley. Simplicity of installation is the main feature of this new system. The 8" high mounting plate, which also acts as a radiant heating surface, fastens to the wall in place of the baseboard and holds the "full-floating" Aqua-Ray finned coil. The primed cover plate, which can be painted any color after installation, slips behind the base plate at the top. The cover plate extends 2½" from the wall and is 6½" deep.



The coils, which are furnished in 8 foot lengths, are ¾" (nominal) copper tubing with an aluminum fin which makes the total tube diameter 2⅜". The coils have a hot water rating of 525 Btu per lineal foot. Coils are suspended on the mounting brackets by chains which make them "full floating." This eliminates heat expansion noises and makes it possible to mount the coils after all connections have been made. The coils are available with two venting arrangements, one for the entire system and one for each room.

Aqua-Ray radiation will be available in complete packages for a variety of Btu ratings so that heating dealers can buy the radiation in "packaged" lots for building developments. The cover plates are furnished in 5 foot lengths. Corner plates, splice plates, and end caps are also available.

Made by: York-Shipley, Inc., York, Pa.

SUPER

LONG LIFE
IGNITION TRANSFORMERS
FOR OIL BURNERS

115 V	60 cy.
230 V	60 cy.
110 V	50 cy.
220 V	50 cy.
110 V	25 cy.

5,000 to 10,000 volts output
single and double pole

15 Years Experience
Hundreds of Models
Heavy Duty Construction
Custom Design
Over One Million Units Now in Use
Radio and TV Shielded
2-Year Guarantee

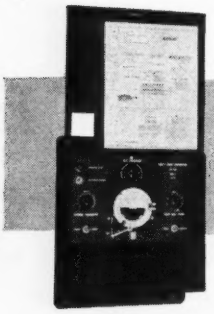
SEND US YOUR REQUIREMENTS NOW!

UNION ELECTRIC AND MANUFACTURING CO.
1057 Summit Avenue • Jersey City 7, N. J.

Make Customers and Influence Profits with HEAT-TIMER

guaranteed controls and valves

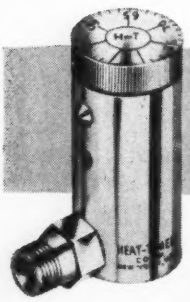
They have no competition



The Heat-Timer Control takes the guesswork out of heating installations

HEAT-TIMER CONTROL

automatically times heat supply to weather, makes possible up to 40% fuel savings; has other important efficiency and economy features. No other control **at any price** offers equal benefits. Installations sell for you. Owners recommend Heat-Timers; managing agents install them in all their buildings. You build for customer satisfaction and increased profits with every Heat-Timer Control that's sold.



Heat-Timer Valves take the "bugs" out of hard-to-balance 1-pipe steam systems

precision-made; long-life; brass, chromeplated.

HEAT-TIMER THERMOVALVE
automatically maintains accurate temperatures, room by room. Has built-in dial thermostat. Does not interfere with existing controls. Angle or straight shank. **List $3.95**

HEAT-TIMER VARIVALVE
gets heat fast to those hard-to-heat rooms, mains and risers. Venting orifice, variable 0" to 5/16". Angle or straight shank. **List $3.45**

HEAT-TIMER CORP'N
657 Broadway, New York 10, AL 4-5380

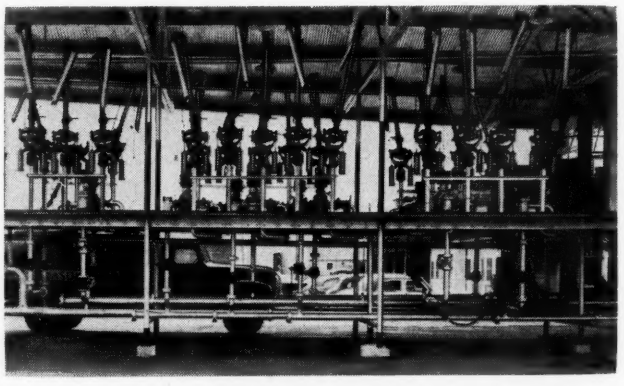
Mfrs. of HEAT-TIMER Electronic Controls, Thermovalves, Varivalves, Motorized Valves; Smoke-Eye Smoke Alarm; Fire-Chief Fire Alarm and other outstanding products.

New Oilco swing Joint equipped with Timken roller Bearings

MODEL 857 Oilco swing joint is equipped with Timken tapered roller bearings to reduce friction to a minimum and promote greater ease and flexibility in handling. Packed with a "O" ring seal, repacking is accomplished quickly with a screw driver, without adjustments or dismantling any part of the joint. The surface upon which the ring rides is heavily chrome plated. Alemite fittings permit proper lubrication.

This modified unit does not supplant any existing Oilco swing joint, but was created specifically to meet the demand for handling heavier loads and for operations of longer range. Available in 3" and 4" iron pipe sizes, inlet end is flanged and outlet end is provided with female pipe thread. Model 857 is applicable to the 450 and 460 Spring-Matic loading assemblies, which are furnished with companion flanged inlets and employ lever-arm action to control the weight and work functions involved.

The new model swing joint resembles model 852, except that the bottom joint has been re-styled and the support connecting the spring-containing cylinders has been lowered to mid-position for added strength and stability.



The illustration shows a portion of the loading rack at the Derby Oil Company's Wichita plant. This enlarged, modern loading platform embraces a battery of 40 Oilco Spring-Matic loaders, 20 on each side of the rack. Loaders are Oilco's 450-A type, pipe size 3". The set-up delivers 450 gpm per loader and services about 100 trucks a day.

Made by: Oil Equipment Mfg. Co., 3100 Vermont Ave., Louisville 11, Ky.

Stewart-Hall Tablets to stop Corrosion in fueloil Tanks

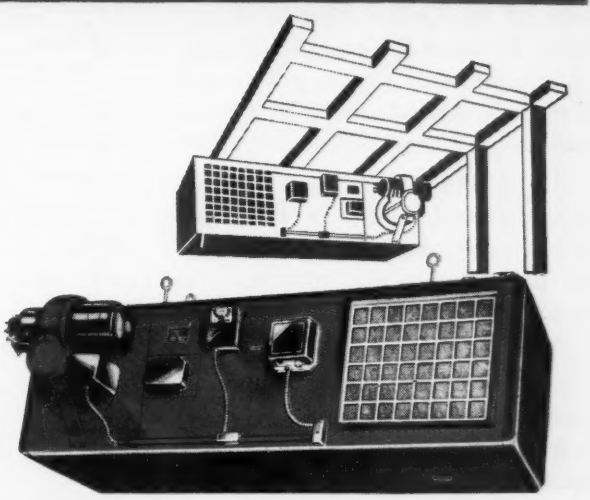
TANK LIFE TABLETS have been introduced to stop rust and corrosion at the bottoms of fueloil tanks. Tests reportedly have shown that the tablets are effective in treating water condensate in storage tanks for oils ranging from kerosene to No. 6.

The tablets are supplied in boxes of six, all of which are emptied into the fill line of storage tanks. The six tablets are sufficient for tanks up to 1500 gals. capacity, additional packages being used for larger sizes. The tablets, which are not soluble in oil, drop to the bottom of the tank and

MORE BUSINESS
complete line

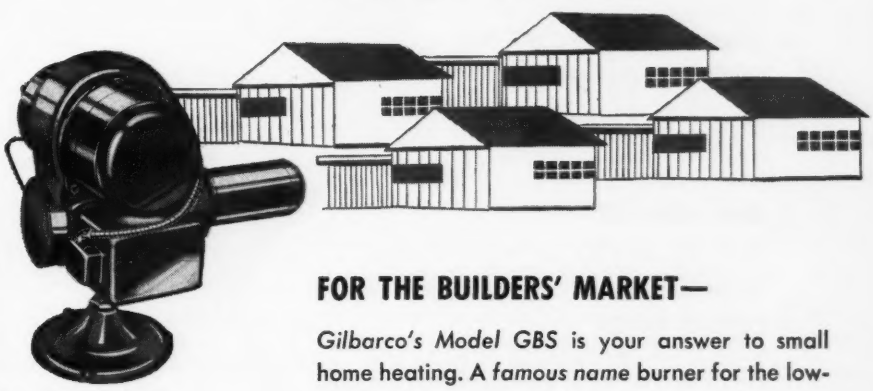
FOR SPACE SAVING COMPACTNESS—

Gilbarco Vertical *"Space-Saver"* floor model; 85,000 B.T.U. capacity. Uses less than 3½ sq. ft. floor area.



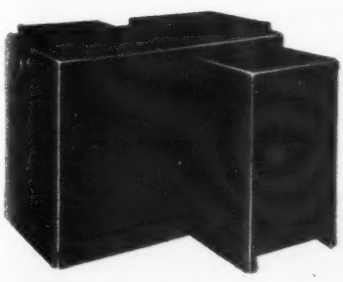
FOR CEILING SUSPENSION HEATING—

Gilbarco Suspended Furnaces are the answer for service stations, stores, garages, commercial buildings and multiple industrial installations. 115,000, 160,000, 200,000 B.T.U. capacity.



FOR THE BUILDERS' MARKET—

Gilbarco's Model GBS is your answer to small home heating. A *famous name* burner for the low-price market.



FOR ECONOMICAL HEATING—

Gilbarco compact *Warm Air Conditioners* are famous for easy installation and economical operation. GWA models are available in 115,000 and 135,000 B.T.U. capacities. GRF "Low-Boy" units come in 4 sizes up to 175,000 B.T.U. capacity.

Gilbarco

Gilbert & Barker Manufacturing Co.
West Springfield, Mass.
Toronto, Canada

fueloil & oilheat

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

Alexander leaves Post as Manager of Oregon Group

BILL ALEXANDER has resigned as manager of the Oregon Heating Industries, Portland 4, Ore. Miss Gladys Welch, secretary for the group, will direct the association's affairs until a successor to Alexander is decided upon.

In accepting Alexander's resignation, the board of directors of the Oregon Heating Industries adopted by unanimous action the following resolution:

"It is with extreme regret that we accept the resignation of Bill Alexander as manager of the Oregon Heating Industries. During the many years that Bill has served the organization, he has been a loyal and devoted employee and the many friends he has made in our Industry join with this Board in wishing him every success in the future."

Warm air Committees hold semi-annual Meeting

THIRTEEN of the 18 committees of the National Warm Air Heating and Air Conditioning Association, Cleveland 14, met on June 11 and 12 at the Edgewater Beach Hotel, Chicago. The Board of Trustees approved the retention of Lorin G. Miller as technical coordinator, whereby he will continue as chairman of the Educational Advisory Board, coordinate the activities of committees who prepare and revise Association - published manuals and analyze test results of the Field Investigation Program. Prof. Miller retired on July 1 from the faculty of Michigan State College.

The Committees discussed proposed changes to the FHA minimum prop-

Miss Harriett Gregath, *Tide Water Associated Oil Co., president of the Kansas City Desk and Derrick Club, is shown receiving the charter of her organization from Jay W. Wilson, left, Standard Oil Co. (Indiana), retired, and president of the Kansas City Oil Men's Club at the Charter Dinner of the Desk and Derrick Club held June 10 at the Continental Hotel in Kansas City, Mo. Ross C. Shannon, Socony-Vacuum Oil Co., Inc., St. Louis, Mo., was the principal speaker.*

ALERT SERVICE MEN SAY "General" FUEL OIL FILTERS

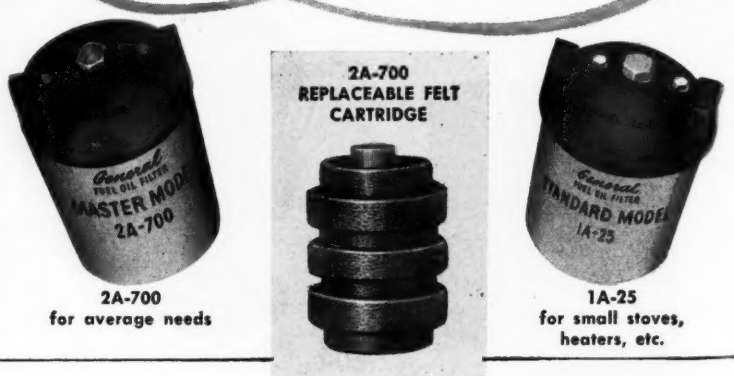
✓ AND CHECK OFF THESE ADVANTAGES

☐ **QUICK PROFIT**
Generals are *easy to sell* because customers *need* GF's positive filtering protection.

☐ **EASY SERVICE**
Single-bolt assembly means instant, sure servicing — no time lost through troublesome "call-backs."

☐ **REPEAT SALES**
Seasonal cartridge changes aid in finding new filter prospects, assure lucrative, dependable earnings.

☐ **SUPER-FILTRATION**
Finest *all-wool* cartridge and GF's unique filter design mean the *safest* filtering known!



2A-700 for average needs

1A-25 for small stoves, heaters, etc.

Veteran fuel oil service men enthusiastically agree that GENERAL FUEL OIL FILTERS are the finest *all-wool-cartridge* filter money can buy! Easily replaceable felt cartridges not only reduce maintenance to a few simple steps but assure positive filtering which puts an end to unprofitable service "call-backs." One cartridge change covers the entire season. In addition, GF's quick, out-in-the-open installations save you time and money on every job.

ANOTHER MONEY-MAKER!
CLEAN RIGHT Soot Remover works safely, gently, quickly cleans any heating plant. Made for General Filters, Inc.

GENERAL FILTERS INCORPORATED — GENERAL FUEL OIL FILTERS — 43800 Grand River Ave. Novi, Mich.

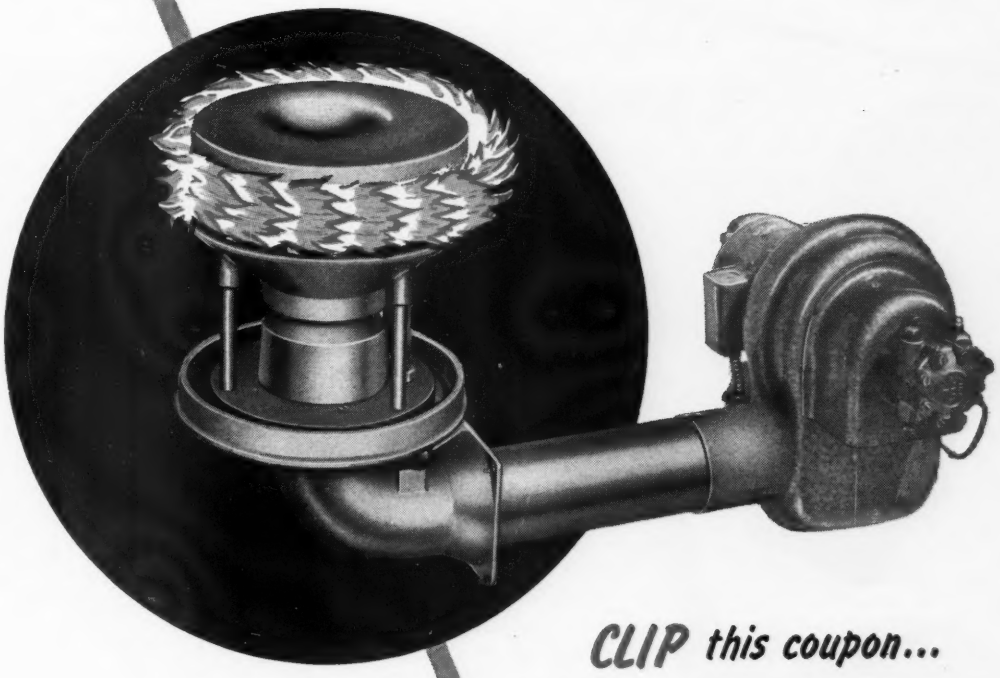
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVENUE, TORONTO 13, ONTARIO

NEW OILGAS GENERATING COMBUSTION HEAD

GIVES MORE HEAT ON LESS FUEL

BUILDS profits for dealers

SAVES money for customers



For the best money making franchise in the oil heat industry take on the Oilgas Generating Combustion Head. All existing gun type burner installations are prospects for this fuel saving, heat increasing unit. Operates like a carburetor. Prevents soot and carbon from forming. Tests have proven 50% fuel savings. Be the first to offer your customers the finest heat producing and fuel saving unit ever developed.

***CLIP** this coupon...*

OILGAS GENERATING BURNER, INC.
410 SOUTH JEFFERSON ST.
NEW CASTLE, PA.

Please send me complete details for securing an Oilgas Franchise and literature describing the unit.

NAME_____

FIRM NAME_____

STREET ADDRESS_____

CITY_____ ZONE____ STATE____

OILGAS GENERATING INC. BURNER 410 SOUTH JEFFERSON ST., NEW CASTLE, PA.

erty requirements and a special committee was formulated to present the Association's recommendations. Also, the Indoor Comfort Conference Committee and the College Short Course Committee went over plans for 1954. Twenty conferences are scheduled.

Speakers during the meeting included W. D. Redrup, president of the Association and C. W. Nessell, chairman of the Field Investigation Committee.

F. L. Meyer, chairman of the Research Advisory Committee, presented R. W. Roose, who is leaving the warm air heating research staff at the University of Illinois, with movie equipment in recognition of his cooperative work.

Simplified accounting Manual for oil Marketers Available

A SIMPLIFIED ACCOUNTING MANUAL which will enable small companies and independent marketers to keep their financial affairs on an even keel will be made available shortly to oil marketers everywhere by the American Petroleum Institute, New York 20, N. Y.

The manual, already off the press, was two years in the making. The Institute's Financial and Accounting Committee for the Division of Marketing, which supervised the preparation of the manual, believes it will fill a long-standing need of distributors and jobbers who do not have professional accountants on their staffs.

The manual is entitled, "A System of Accounting for Distributors and Jobbers of Petroleum Products."

Among the subjects covered in the manual are: asset and liability accounts, with explanatory test for each and a sample balance sheet; description of income, cost and operating accounts, with sample statements; explanation and description of books and ledgers required for payroll records, sales reports, cash books, product purchase ledgers, stock control records, sales reports, expense summaries, and many others; recurring journal entries, including outlines for monthly and yearly closings; and financial analyses and expense distributions.

North Carolina Jobber Group postpones Cruise to May 1954

THE SAILING DATE for the Bermuda Cruise which is being sponsored by the North Carolina Oil Jobbers Association, Raleigh, N. C., originally scheduled for October of this year, has been postponed to May 1954.

There were several reasons for the change, the Association reported. One was that October is the beginning of the home heating season and another complaint was that October is too near the hurricane season.

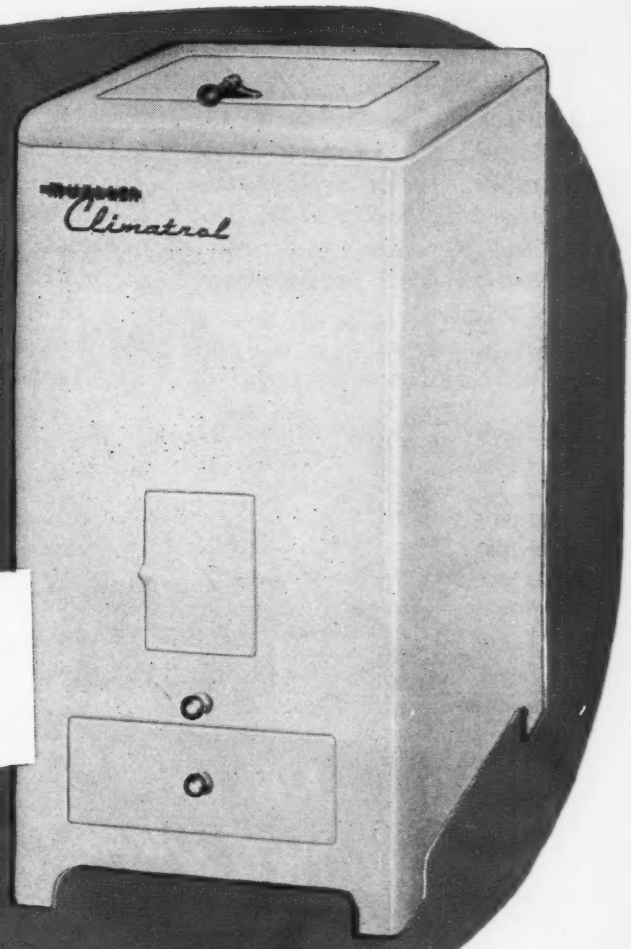
The Bermuda cruise will be the Association's Spring Convention for 1954. This year the Spring Convention was held at the Carolina Hotel, Pinehurst, May 27 to 29.

I-B-R School of Modern Heating announces 1953 fall Schedule

A FALL and early winter schedule for the I-B-R School of Modern Heating has been announced by The Institute

A Sure Cure for servicing headaches—
Eddington
OIL BURNER NOZZLES
FACTORY TESTED TO INSURE PERFECT OPERATION!
RIGHT FOR SPRAY ANGLE ATOMIZATION, AND RATED CAPACITY
LARGE CAPACITY MONEL STRAINER KEEPS ORIFICE AND SLOTS FROM PLUGGING!
Speed up installations and check-ups— EDDINGTON FLEXIBLE INSPECTION MIRROR
We'll be glad to send you complete information on any Eddington Products. Write today.
Eddington METAL SPECIALTY COMPANY
EDDINGTON • PENNSYLVANIA
Makers of: FILTERS • NOZZLES • VALVES • STABILIZERS
AIR CONES • STRAINERS • INSPECTION MIRRORS
ADAPTORS • SERVICEMEN'S NOZZLE KITS

Now a Mueller Climatrol Gas-Fired Incinerator



...for new profits the year around

You sell a famous, nationally-advertised brand name!

You offer the plus value of Mueller Climatrol design advantages!

Sized right—has 1.6 bushel capacity to handle big family garbage and trash.
A.G.A. approved — for continuous operation.

Handsomely designed—available in standard grey or deluxe white models.

Easy to install—shipped assembled. Simply install flue and run gas line to unit.

Trouble-free — once installed, unit requires no servicing. Light and forget — no moving parts.

Burns anything — except metal or glass — including rinds, peach pits, old shoes, paper, vacuum-cleaner dirt, corn cobs and magazines.

MORE profits from Mueller Climatrol are coming your way — all year 'round. For now Mueller gives you something new to sell — the Mueller Climatrol Incinerator. It's handsomely styled and attractively priced, to give you the jump on competition in the big, year around home-incinerator market. And it sells in the months when your regular heating business is apt to be slow.

But that's not all — you profit another way, also: Every sale of a Mueller Climatrol Incinerator is a "door-opener" that helps you uncover new prospects for Mueller Climatrol heating and air-conditioning equipment.

Yes, sir, the Mueller Climatrol Incinerator offers a double-barreled, volume-building opportunity you can't afford to pass up. Get the whole story now, by mailing the coupon below.

D—134-B

96th Anniversary

Mueller Climatrol

For money-making details, tear out coupon and mail today!

L. J. MUELLER FURNACE COMPANY
2050J W. Oklahoma Ave., Milwaukee 15, Wisconsin

The Mueller Climatrol Incinerator sounds like more money in the bank for me. Send more information.

Name.....

Company.....

Company Address.....

City.....State.....

Fueloil & oilheat

of Boiler and Radiator Manufacturers, Chicago 1.

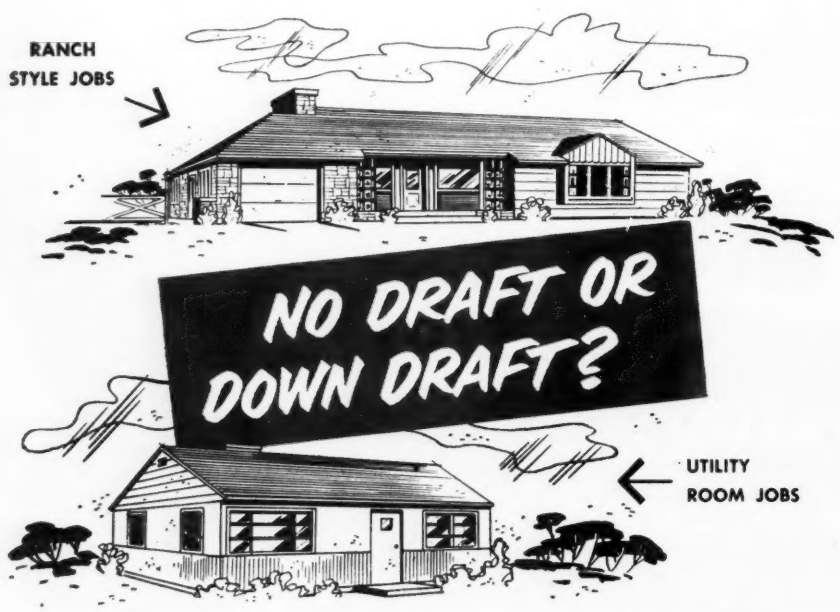
Schools will be held in the following cities:

Springfield, Mass., October 13-15; Reading, Pa., October 20-22; Charleston, West Va., October 27-29; Canton, Ohio, November 4-6; Scranton, Pa., November 17-19, and Providence, R. I., December 1-3.

I-B-R Schools yet to be held this summer included one in San Francisco, Calif., August 18-20; one in Denver, Colo., August 31 through September 2; and one in Lincoln, Nebr., September 9-11.

The Schools in the western states will be followed by two schools in Canada sponsored by I-B-R members in Canada and the Canadian Plumbing and Heating Institute.

A school in Toronto will be held in the Canadian Legion Memorial Building, Toronto, Can., September 30 through October 2. A school in Montreal, Can., will be held at a later date.



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HART
Supra-Flame
(HCM-SF)

ABSOLUTELY
GUARANTEED
TO CURE PULSATIONS!
(ON 0.65 TO 1.65 GPH INCLUSIVE)

Only
HART
Gives You
All Four!

1. Guaranteed to cure pulsations.
2. Silent operation.
3. No "cut and try" adjustments — head welded in as part of draft tube and nozzle assembly.
4. CO_2 readings 10.5 to 12.5% without smokiness.

Difficult low, zero, or down draft jobs in ranch-type homes or other "problem" homes lick themselves when you use the new HCM model HART Oil Burner with the Supra-Flame Head. Pulsationless burning is guaranteed!*

*MONEY-BACK GUARANTEE
(to experienced, bonafide oil burner men)

Order a HART Supra-Flame Burner. Install it on your toughest pulsating job and poorest draft conditions. If, within 60 days, you are not completely satisfied in every way with the HART Supra-Flame Burner, we'll take it back and *refund price of burner, no questions asked!*

"HOME IS WHERE
THE HART IS"

HART HEAT
Division of Avery Farm Machinery Co.
2006 S. Washington
Peoria, Ill
Phone 4-9271

ORDER NOW. PHONE COLLECT, TELEGRAPH OR WRITE ON LETTERHEAD

Brandli and Meeder elected to N. Y.-N. J. district OIIC Posts

HENRY E. BRANDLI, president, Cities Service Oil Co. (Pa.) has been elected district chairman and Frederick H. Meeder, president, Richfield Oil Corp., New York, N. Y., has been elected New York State chairman of the New York-New Jersey district, Oil Industry Information Committee, New York 20, N. Y.

Brandli and Meeder will take office January 1, 1954, and in the meantime, will serve as members of a newly formed six man district operating committee, which includes W. Chalmers Burns, president, Hartol Petroleum Corp., and chairman of the New York-New Jersey district; William W. Bryan, division manager, Esso Standard Oil Co., New Jersey state chairman; John L. Lenker, regional manager, Gulf Oil Corp., present New York State chairman and Quentin W. Regestein, division manager, Socony-Vacuum Oil Co., former New York State chairman.

OHI of northern Ohio elect new Officers and Trustees

RAYMOND H. QUIGGEN, Quiggen & Son, was elected president, The Oil Heat Institute of northern Ohio at the group's annual meeting at Richmond Valley Inn at Grand River, Ohio.

Robert S. Daniels, Timken-Silent Automatic Burner Corp., was elected vice-president and Norman R. Steenstra, The Standard Oil Co. (Ohio) was elected secretary and treasurer.

The new trustees elected are: Quiggen, Steenstra, Joseph H. Robbins, Universal Fuel Saver Co., and E. K. Harrop, Socony-Vacuum Oil Co.

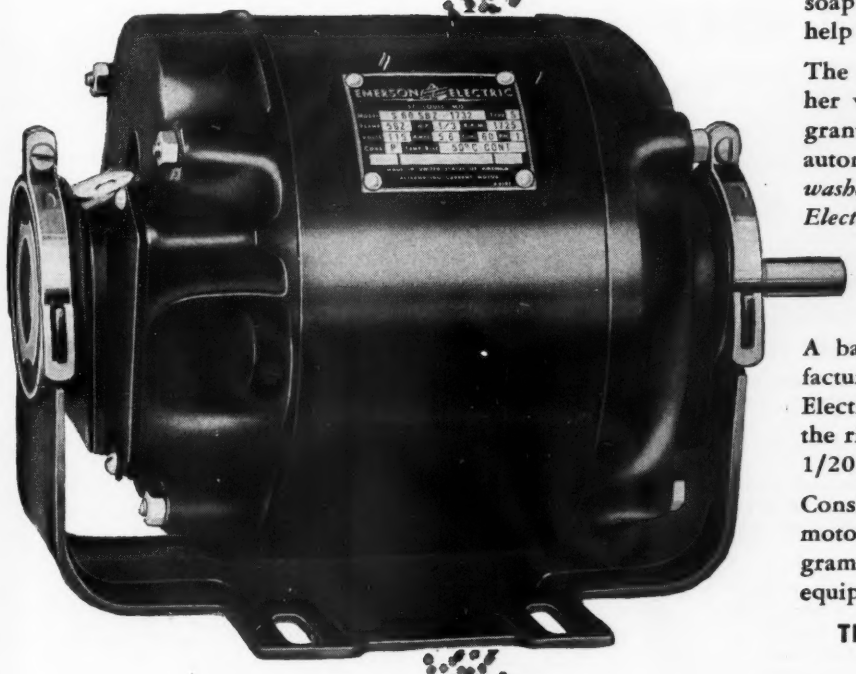
API Marketing Division sets up special educational Program

A SPECIAL Educational Program Subcommittee has been set-up by the Division of Marketing, American Petroleum Institute, New York, to study the advisability of API cooperation in the development of management institutes for distributors and jobbers

clothes come clean ... at home

"Cleaner!" "Whiter!" "Quicker!" Those sprightly soap jingles would be meaningless, without the help of the modern washing machine!

The greatest compliment a housewife pays her washing machine is that she takes it for granted. She pushes a button . . . it operates automatically. *On many of America's best known washers and driers that button starts an Emerson-Electric motor.*



A background of 63 years of motor manufacturing experience stands behind Emerson-Electric motor design and production, offering the right motor for every job, in ratings from 1/20 to 5 h.p., or hermetic motors ⅛ to 20 h.p.

Consider the advantages of Emerson-Electric motors when planning your long-range program for top-flight leadership ratings on your equipment.

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

Write for these Emerson-Electric Motor Data Bulletins

Manufacturers requiring motors 1/20 to 5 h.p. can profitably use these reference guides. Specifications, construction and performance data are included for these motors:

- ☐ 425-A Capacitor-Start
- ☐ 425-B Split-Phase
- ☐ 425-C Integral
- ☐ 425-D Fan-Duty
- ☐ 425-E Oil-Burner
- ☐ 425-F Jet Pump
- ☐ 425-G Blower

EMERSON ELECTRIC
MOTORS • FANS — APPLIANCES

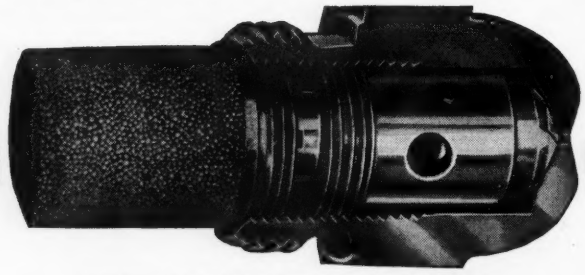
The subcommittee was appointed by J. E. Dyer, chairman of the Jobber Advisory Committee. It was instructed to "undertake a study of what has already been done and is being done in the field of adult education with particular reference to programs of education in management sponsored by industry and administered by existing institutions of higher learning." A full report and appropriate recommendations are to be made to the next meeting of the Jobber Advisory Committee in November.

Robert A. Kent, Kent Oil Co., Salina, Kans., was named chairman of the special subcommittee. Other members ars: E. K. Bennett, E. K. Bennett Oil Co., Longview, Tex.; John F. Cummins, Cumberland Oil Co., Nashville, Tenn.; M. D. DeTar, Aero Oil Co., New Oxford, Pa.; Jess Knowles, Skelly Oil Co., Kansas City, Mo.; E. F. McCabe, Tidewater Associated Oil Co., New York; M. H. Robineau, Frontier Refining Co., Denver, Colo. and George L. Savory, Savory Oil Co., Binghamton, N. Y.

L. T. White, Cities Service Oil Co., New York, N. Y., will act as a consultant to the special subcommittee.

PULSATION TROUBLE?

LET *Monarch* HELP YOU!



HERE IS WHAT YOU NEED:

1. Monarch F-80-AR series 80° angle nozzle.
2. Recommended Monarch F-57 Air Cone and H-451 Stabilizer.
3. Solenoid shut-off Valve for nozzle line.

Set the Monarch equipment according to our recommendations in catalog "O" and see for yourself that *results* are obtainable!

These combinations have been proven by actual use in thousands of installations over a period of years. They will positively minimize if not completely cure ordinary running pulsation so prevalent in many small highly restricted units.

"48" Nozzle Box

Don't jumble your nozzles loosely in your tool box like "nuts and bolts" if you expect them to be usable. Carry as many as 48 nozzles securely in this sturdy, compact steel box.

Do you have new Catalog "O"?

Nozzle-Firebox Slide-Chart

No more digging through catalogs for proper nozzle capacities for certain loads, correct fire box sizes for different firing rates, or nozzle capacities at different operating pressures. This pocket slide-chart gives all these (and more) figures at a glance.

DEALERS: Buy from your Monarch Jobber

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST., PHILADELPHIA 34, PENNA.

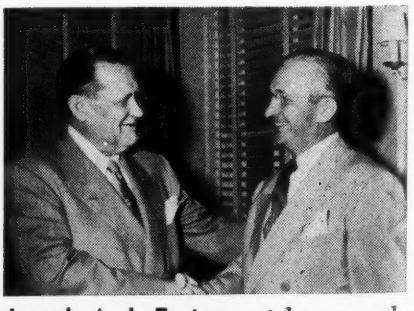
Canadian Sales Agents: (Except B.C.) Canadian General Filters, Ltd., 2679 Danforth Avenue, Toronto 13
Central and Southern Europe: A Coutau, Rue de la Scie 16, Geneva, Switzerland

Five Months Building Up Eight Percent

THE CONSTRUCTION BOOM in the 37 states east of the Rockies continued to spiral towards a 1953 all-time record in contracts awarded as five month totals gave the current year an 8 per cent edge over 1952, it was reported by F. W. Dodge Corporation. The five-month 1953 figure was $6,792,329,000 according to Dodge Reports totals.

Nonresidential building for five months showed the greatest increase over 1952 with a $2,492,801,000 total which was up 16 per cent. Residential awards at $2,795,412,000 was up 1 per cent. Heavy engineering (public works and utilities) at $1,504,116,000 was up 11 per cent.

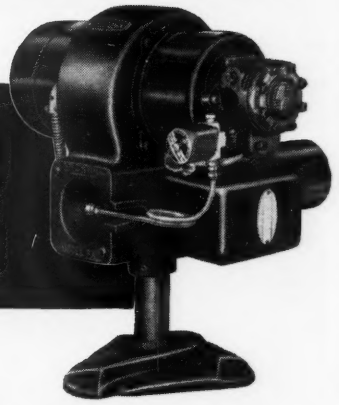
The Dodge Reports construction total for May was $1,606,091,000 or 8 per cent behind April but 3 per cent ahead of May 1952. Individual May awards showed nonresidential contracts of $582,061,000 down 15 per cent from April but up 26 per cent over May last year. Residential awards of $637,721,000 were 5 per cent less than April and 15 per cent less than May 1952. Heavy engineering at $386,309,000 was less than 1 per cent below April and was 11 per cent above May a year ago.



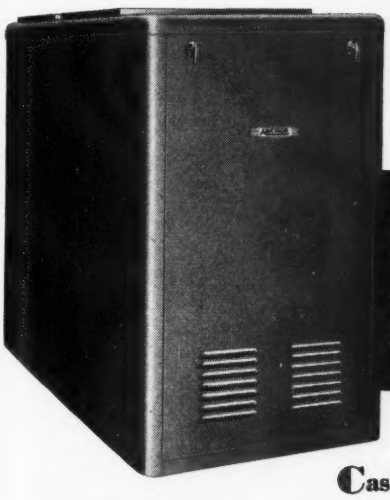
Joseph A. LaFortune, *right, recently appointed Deputy Administrator for Defense, is congratulated by Walter S. Hallanan, chairman of the National Petroleum Council, during a luncheon in New York. Hallanan arranged the luncheon on July 20, attended by top executives of the oil industry in the New York area who are members of the Council.*

Now is the Time for Smart Dealers to Sell

ANCHOR



CONVERSION BURNERS



OIL FIRED FURNACES

Cash in on Anchor's great new line of oil heating equipment. You'll get *more* sales *easier* with Anchor. Customers appreciate the greater economy, the higher heat output. Anchor's Shell Combustion Head affords far greater efficiency than ordinary heads. Every single tiny oil droplet is completely consumed. *You* will enjoy less servicing and more repeat business.

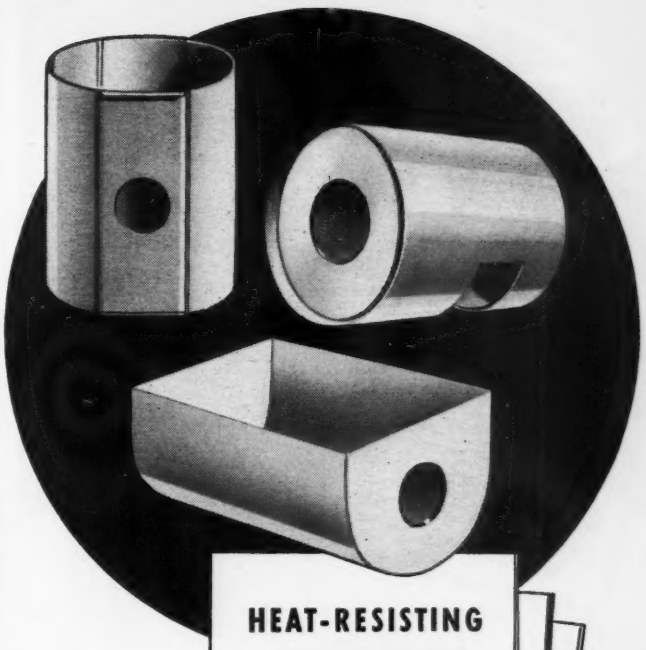
Don't delay — get the Anchor franchise facts now! The Anchor Franchise is loaded with features that mean more profits for you.

ANCHOR DIVISION

STRATTON & TERSTEGGE CO., INC.

P.O. BOX 311, NEW ALBANY, INDIANA

88th Year of Manufacturing the Best in Mid-West!



HEAT-RESISTING

STEEL

SHEARED TO SIZE

for your

COMBUSTION CHAMBERS

If you are using or contemplating the use of heat-resisting stainless steels for combustion chambers for oil burner furnaces, we are specialists in producing these types of steels.

Whether you are a large or small user of these steels, our facilities can offer exceptional service by especially shearing to your specified combustion chamber blanks, or multiples thereof.

Write us for additional information

ENGINEERING B-W PRODUCTION

Ingersoll STEEL DIVISION

BORG-WARNER CORPORATION

310 South Michigan Avenue, Chicago 4, Illinois

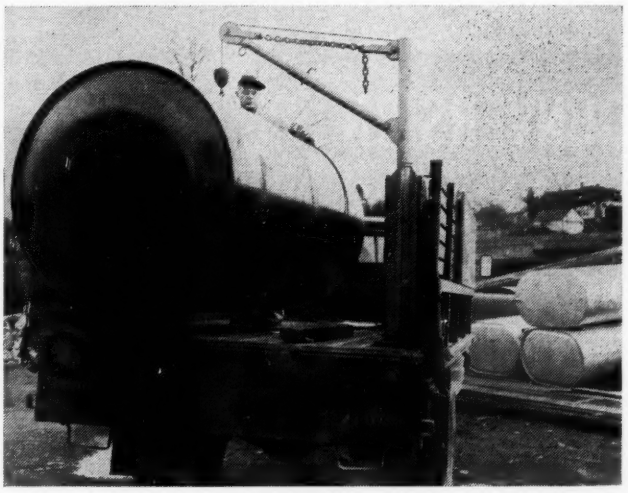
Plant: New Castle, Indiana

neutralize the acid water condition which causes rust. Tablets may be purchased in bulk, if preferred.

Made by: Stewart-Hall Chemical Corp., 550 S. Fulton Ave., Mt. Vernon, N. Y.

Pacific Hoists and Winches for Use in Trucks and Shops

PACIFIC portable truck loading hoist features adjustable boom length and height, with a 360° swing. The hoist, which has a capacity of 1,000 lbs., operates from a truck battery and is interchangeable from truck body to shop dolly. The illustration shows how the truck hoist is used



AT-A-GLANCE
Sentry
TANK GAUGES
REMOTE READING
INDOORS • OUTSIDE
UNDERGROUND
ACCURATE, DEPENDABLE, WEATHERPROOF GAUGES
Easy to install... Easy to read!
Unaffected by specific gravity changes or variations, Sentry Remote Gauges accurately indicate liquid level at all times. Simplified mechanical operation eliminates unnecessary fittings, bulbs or levers for serviceman to tamper with as well as his need for access to building. Remote Gauge may also be combined with At-A-Glance Direct Gauge, shown below, for readings at both tank and remote location if desired. Non-corrosive, stainless steel and brass extension lines connect tank float with heavy-duty cast aluminum, weatherproof, thermometer type indicator — calibrated in fractions. Unconditionally guaranteed. Write for descriptive literature.
Type D-O and D-10 Gauge for basement tank installations with 2" and 1½" openings respectively.
Type D-U Gauge for underground tank installations. Fits 2" openings only.
Sentry AT-A-GLANCE GAUGES
For accurate DIRECT tank readings
Fastest selling, most popular gauge in the industry. Simplified mechanism eliminates gears, cams, springs and magnets that wear out and cause trouble. Durably constructed with patented assembly featuring unbreakable, fog-proof, heavy-duty double plastic domes with printed calibration scale between for clear, easy-to-see readability from any direction. Gauge is Underwriters' Listed and will withstand in excess of 70 lbs. air pressure per sq. inch. Entire unit is non-corrosive and guaranteed leakproof under pressure filling and against defective operation, workmanship and materials. Quick, simple to install even on partially filled tanks. Write for complete descriptive literature.
AT-A-GLANCE
OIL GAUGE
KRUEGER SENTRY GAUGE CO.
KRUEGER Sentry GAUGES
GREEN BAY • WISCONSIN

DRAFT FREE - WARM AIR HEAT
install
Patco MFG CO
WARM AIR BASEBOARD
• PATCO DISTRIBUTES a gentle flow of warm air along the length of the PATCO AIR-BASEBOARD, blanketing entire wall area with a film of warm air, eliminating drafts from cold walls.
• GENTLE WARM FLOW
No blast to create drafts.
Write for this installation manual, and get acquainted with PATCO AIR-BASEBOARD.
PATCO HEATING SYSTEM
INSTALLATION MANUAL
PATCO
AIR-BASEBOARD
THE WALL RADIATES HEAT
PATENT PEND
231 N. BREAD STREET, PHILADELPHIA 6, PA.

Good news for you— and your customers!

Anti-spilling depressed cover . . . over 200 sq. ins. of filtering surface . . . stops dirt down to .0002 in. . . . more than 100 g.p.h. gravity flow capacity . . . 7,000 gal. per year dirt-retention life.

Purolator Filter Refills are interchangeable with other popular filters.

. . . the new PurOlator micronic* Oil Burner Fuel Filter

✓ Fewer service calls for you!

✓ More dependable heat for your customers!

Made by the makers of famous Purolator* Micronic Automotive Filters—standard on America's quality cars—this new oil burner filter brings you installation and service advantages that put it at the top of its class!

Write for specifications and name of your nearest supplier.

*Reg. U.S. Pat. Off.

PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada
Factory Branch Offices: Chicago, Detroit, Los Angeles

PUROLATOR
WORLD'S FINEST OIL FILTER

it's all new!

400 AF*

FLANGE MOUNTED OIL BURNER

*400-A pedestal mounted with 4" adjustment for standard type of installation.

designed for top performance in

- **FURNACES**
- **BOILERS**
- **WATER HEATERS**

Effectively Minimizes Pulsation.

With the addition of this new model, U. S. dealers are now able to flange mount U. S. Burners to the many furnace, boiler and water heating units that are so widely used in today's *home building* and *modernization market.*

This is no ordinary flange mounted unit, but an oil burner that represents the results of painstaking research and field tests to determine the most efficient and saleable unit for today's market in the furnace, boiler and water heater field. The 400 AF incorporates all the advanced engineering features for which U. S. Oil Burners are justly famous.

A specially designed air deflector baffle, adjustable in the field, insures a thorough mixing of air and oil at all times. This adjustable air deflector also provides positive positioning of fire from the end of the air cone. As a result, pulsation has been effectively minimized.

Remember this is only one of the famous U. S. Oil Burners — ranging in capacities from 0.50 to 20.00 G.P.H. You can install them with confidence — sell at a profit — require a minimum of service and carry a time-tested and trusted name.

Contact your supplier or write us today.

U. S. BURNER DIVISION
THE CARLIN COMPANY
Wethersfield, Connecticut

— gives heating comfort unequalled by any other method!

Here, Mr. Heating Contractor, is your BIG sales opportunity for 1953. When you sell and install the Thermo-Base System, you are selling both **health** and **comfort.** Quote Thermo-Base on every job and watch your sales and profits grow!

CHECK ✓

these features that make your selling job easier!

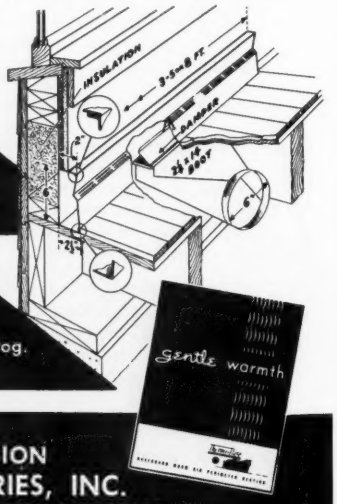
✓ **INSTALL AROUND OUTSIDE WALLS**
. . . gives gentle warmth from ceiling to floor. Exclusive design eliminates drafts, hot spots and frigid fringes. Allows **complete** freedom for furniture arranging.

✓ **3 CONVENIENT LENGTHS**
Eight, five and three foot lengths are accurately rated for all static pressures and air temperatures. Units are finished in grey prime coat. Easily blended to any decorating scheme.

✓ **HEALTHFUL HEAT**
The Thermo-Base System gives equal distribution of humidified and filtered air. Draperies and walls stay clean longer.

✓ **AIR CONDITIONING**
Perfect air distribution makes Thermo-Base the ideal system for summer cooling.

Here is one of many ways that Thermo-Base may be economically installed in either NEW or OLD CONSTRUCTION.



SEND TODAY! for this new, comprehensive eight page catalog.

THERMO-BASE DIVISION
GERWIN INDUSTRIES, INC.
MICHIGAN CITY, INDIANA

to handle fueloil tanks. Model 52P operates by remote push button control, automatically brakes at any point and is designed with an ample factor of safety.

A model 52W operates in the same way, but is a truck winch. Both models are capable of lifting 500 lbs. 10 ft. in one minute or 250 lbs. 15 ft. in one minute. With half tackle, the devices can lift 1,000 lbs. 5 ft. in one minute.

Made by: Hoist Div., Rushlights, Inc., 2944 S. E. Powell, Portland 2, Ore.

Honeywell designs plug-in Control for Dehumidifiers

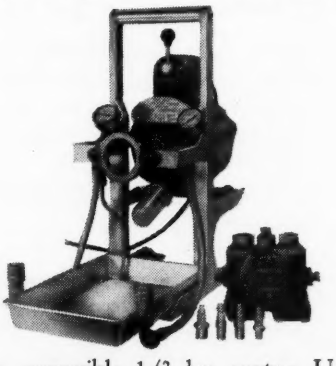
A PLUG-IN CONTROL for portable home dehumidifiers, introduced by Minneapolis-Honeywell, utilizes a human hair sensing element. In size and appearance the new control resembles a room thermostat and contains a completely enclosed Micro switch that can operate a 1/8 hp motor directly.

Anyone able to use a screwdriver is able to install the control, which is hung on a wall, using a template and two wood screws and a 6 ft. cord plugged into a wall socket. The cord has a "series" plug with both male and female outlets, the male outlet going into the wall socket, the electrical cord from the dehumidifier being plugged into the female outlet. When the control is set for the desired humidity content, operation becomes completely automatic.

Made by: Minneapolis-Honeywell Regulator Co., Minneapolis 8, Minn.

Portable fuel unit Tester complete with pump Flange

A PORTABLE fuel unit tester available from Gasoilair Equipment is described as simple to operate, yet performs a complete job. With it testing and repairing of pumps, fuel units and valves is made possible. The tester is supplied with instructions and is constructed with standard parts.



Furnished complete with pump flange, reversible 1/3 hp. motor, U. S. gauges, pressure fuel lines, quick couplings, adaptors and parts catalog. The unit is offered at a trade price of $80, f.o.b. New Haven.

Made by: Gasoilair Equipment Co., P. O. Box 768, New Haven, Conn.

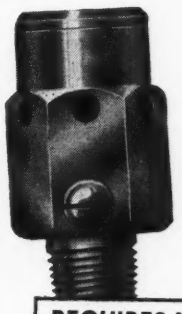
YOU'LL LICK YOUR AIR PROBLEMS WHEN YOU

Buy Taco

AIR VALVES

THEIR *Greater Dependability*

MEANS LESS SERVICE FOR YOU



TACO-VENT

Automatic

HOT WATER

AIR VALVE

automatically vents radiators, convectors and baseboard radiation.

biltin water control prevents leaking

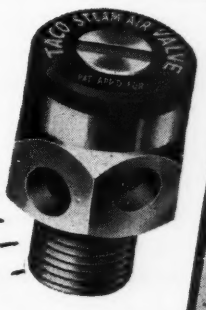
REQUIRES NO ADJUSTMENT

TACO'S

New Quiet

STEAM

AIR VALVE



NO SNAP —
NO POP —
NO HISS —
NO PING —

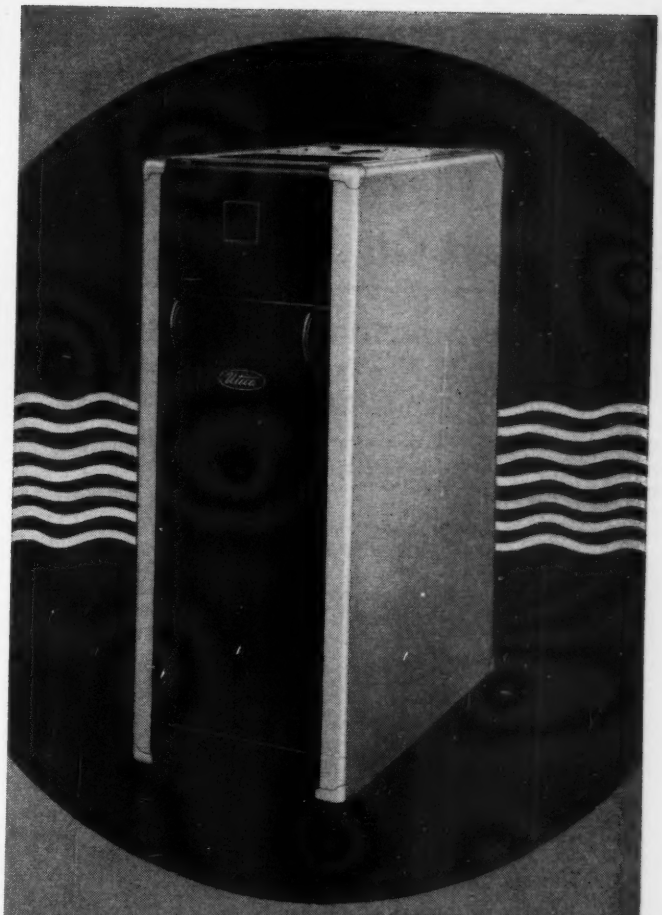
vents steam radiators, convectors, mains. It's fast venting, simple, silent and good looking.

Both CAN BE INSTALLED IN ANY POSITION BUT UPSIDE DOWN

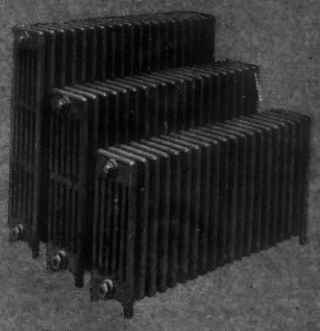
Better Heating-Better with Taco

Taco

TACO HEATERS, Incorporated
137 South Street • Providence 3, R. I.



PRECISION PRODUCTS *mean* ASSURED QUALITY



UTICA RADIATOR CORPORATION

UTICA 2, NEW YORK

BOILERS · RADIATORS
HEATING ACCESSORIES

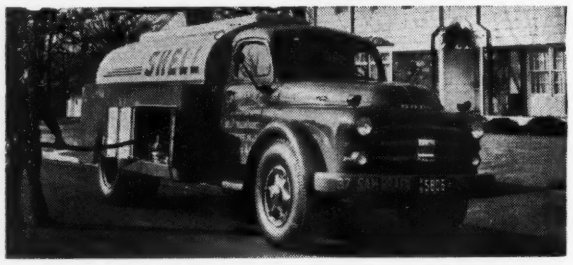
No Greater Value Ever Than These Complete* Fuel Oil Trucks!

IMMEDIATE DELIVERY ANYWHERE in the U. S. A. - Trades accepted - Terms arranged

1000 GALLON — 2 compartment tank; fully skirted, top shrouding; 1½" ticket printer (your choice); 125' 1¼" hose and electric reel; 1953 Dodge 1½ ton with 7:50 x 20 8 ply tires; complete $4,078.00

1300 GALLON — 2 compartment tank; equipped same as above; 1953 Dodge 2 ton with 8:25 x 20 10 ply tires, complete $4,488.00

1600 GALLON — 2 compartment tank; equipped same as above; 1953 Dodge 2½ ton with 9:00 x 20 10 ply tires; complete $5,286.00



1750 GALLON — 2 compartment tank; equipped same as above; 1953 Dodge 2½ ton with 9:00 x 20 10 ply tires; 19000 lb. G.V.W. chasis; complete $5,478.00

2100 GALLON — 2 compartment tank; equipped with 2" ticket printing meter (your choice); 125' 1¼" hose and electric or "Fluid Drive" reel; 1953 Dodge 3 ton with 10:00 x 20 12 ply tires; complete $6,882.00

2450 GALLON — 2 compartment tank; equipped same as above; with 100% air brakes; 1953 Dodge 3½ ton with 11:00 x 20 12 ply tires; complete $7,916.00

3300 GALLON — 1953 Dodge 4 ton; specifications on request; complete $11,890.00

REAR INSTALLED EQUIPMENT and VARIATIONS IN BASIC SPECIFICATIONS AVAILABLE IN ALL SIZES. OTHER TANK SIZES, PRICES ON REQUEST. Prices include all federal taxes. Consideration given to state and local requirements.

* *Includes chassis, tank, pumping and metering equipment*

Decker Brothers

Send for FREE Catalog FO

300 Lincoln Avenue
HAWTHORNE N. J.
Hawthorne 7-2100-2101-2102

Sabanol Additive homogenizes Sludge, emulsifies Water in Fueloil

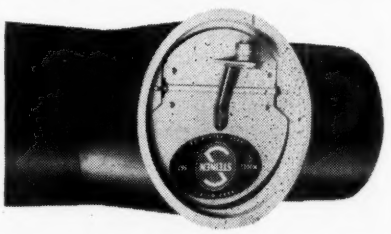
SABANOL is a homogenizing fueloil treatment, mixed 1 qt. to each 1,000 gals. of fueloil, that is intended to disperse and hold in suspension sludge and water. In addition, the additive contains a soot retardant and rust inhibitor, designed to provide a clean system from tank to burner to stack.

Sabanol is a non-toxic, neutral, concentrated liquid fueloil treatment, which has a flash point of over 200° F. and is approved for ship stores by the U. S. Coast Guard. It functions by bringing about colloidal homogenization of sludge and emulsification of water so that they disperse minutely and burn with the oil.

Made by: American Sand-Banum Co., Inc., 9 Rockefeller Plaza, New York 20, N. Y.

Steinen draft Regulator offered for Smokepipes from 5″ to 10″

TWO SIZES of Steinen draft regulators are being offered, the 6″ size for use on smokepipes of 5″, 6″ and 7″ diameter, the 9″ size for smokepipes of 8″, 9″ and 10″ diameter. Long collars are supplied with each to keep the vane out of the path of escaping soot and smoke in the smokepipe. The regulators feature corrosion-resistant surface treatment of the entire assembly, plainly marked range of adjustment from 0.2 to .08 ins. water.

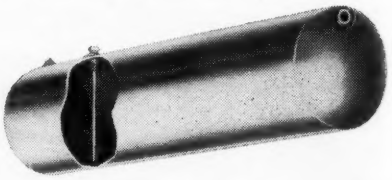


Two innovations in draft control design are incorporated in the Steinen draft regulator. First, in setting the calibrated adjustment both weights move simultaneously, eliminating the time-consuming practice of setting two weights to balance the vane. Second, there is a provision in the regulator itself for attaching a short plumb line, no longer than 1½ times the smokepipe diameter, whereby the regulator may be levelled vertically and horizontally. This requires only a short cord and a small washer or nut for a weight.

Made by: Wm. Steinen Mfg. Co., 43 Bruen St., Newark 5, N. J.

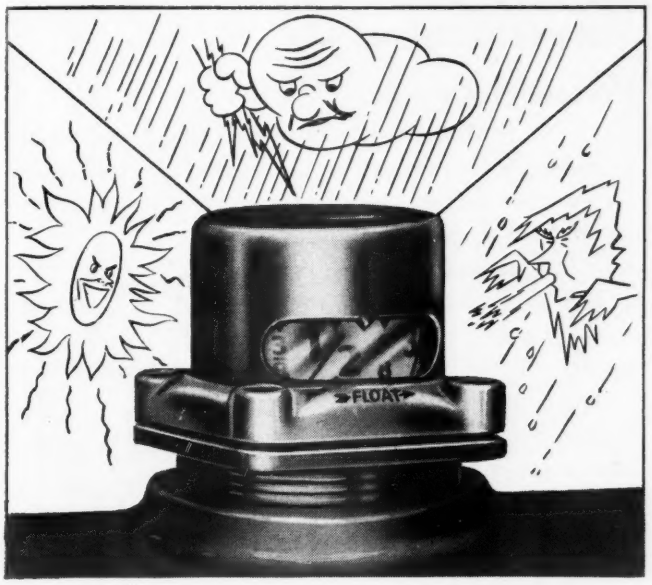
Thrush adds vacuum Breaker to its five Models of pressure Tanks

ALL THRUSH pressure tanks for hot water heating systems now are shipped equipped with vacuum breakers, to admit air quickly and speed draining. The vacuum breakers are furnished "at no extra cost."



It no longer will be necessary to drain the entire system

NOW you can do something about the weather



It's sealed out of the *Rochester* UNIVERSAL® oil tank gauge

WEATHERPROOF! New head and flange design provides a shockproof, hermetically sealed unit that positively locks out dirt, moisture, and other foreign materials. This assures extra years of trouble-free service under *all* weather conditions.

STOCK JUST ONE GAUGE for all installations! It pays to standardize on ROCHESTER UNIVERSAL Gauges. Indoors or out, they'll remain accurate and easy-to-read for years to come.

NO SEEPAGE! NO FUMES! A powerful permanent magnet transmits float-arm action from tank to indicator . . . there are no holes in the gauge.

EASY TO READ. "DUAL DIAL" can be seen from front or back . . . makes tank filling and checking a snap.

EASY TO INSTALL and stocked by leading wholesalers everywhere for all standard oil burner storage tanks. Rochester Manufacturing Co., Inc., 8 Rockwood Street, Rochester 10, New York.

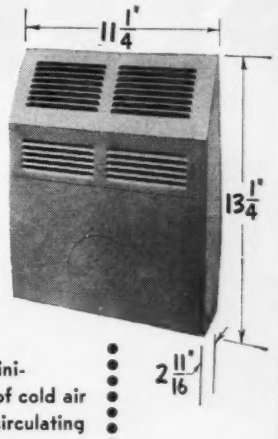
OHI

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

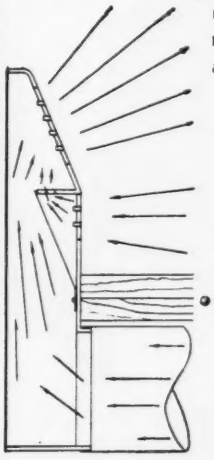
ROCHESTER DEPENDABLE ACCURACY GAUGES

YOUR BEST BUY FOR WARM AIR INSTALLATIONS!

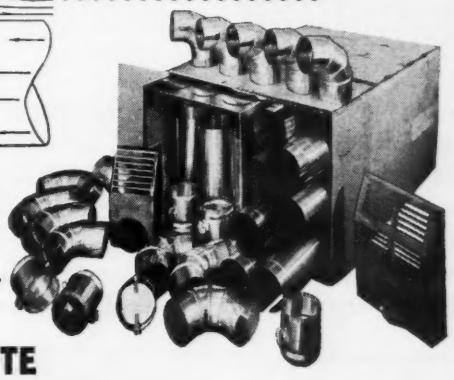
NEW G/A DIFFUSER MINIMIZES COLD AIR RETURNS



The NEW General Automatic TEMP-RD AIR DIFFUSER makes installations quick and easy . . . and, therefore, extra profitable! Eliminates all cutting and framing! Register box fits flush with the wall surface . . . the only openings necessary are in the floor, to make duct connections. Special design minimizes the use of cold air returns by circulating air within the rooms.



INQUIRE ON COMPANY LETTERHEAD FOR SPECIAL TRADE PRICE



COMPLETE READY-TO-INSTALL PACKAGES AVAILABLE!

You can now order General Automatic Temp-RD Air in the profitable factory package shown above. Shipped complete and ready to install! Contains all necessary material . . . including Diffusers, furnace bonnet assembly, necessary pipes and connections, and COMPLETE COLD AIR RETURN GRILL. Simplifies ordering procedure and greatly reduces storage space. WRITE TODAY FOR FULL DETAILS!

GENERAL Automatic
GENERAL AUTOMATIC PRODUCTS CORP.

2300 Sinclair Lane **Baltimore 13, Md.**

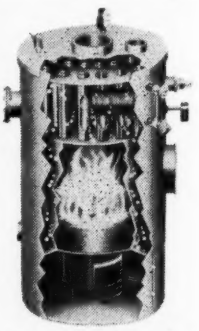
Canadian Representative:
HEATING EQUIPMENT CO. LTD., 444 St. Germaine, Toronto, Canada
Representatives in principal cities

when a pressure tank needs to be drained. Instead the shut-off valve in the tank line is closed, the tank drain valve opened and the vacuum breaker unscrewed. This permits air to enter the tank so that the water flows in a full stream from the drain. The average tank with vacuum breaker will drain in 10 mins. All five sizes of Thrush pressure tanks are so equipped.

Made by: H. A. Thrush & Co., Peru, Indiana.

Portmar rotary flame Boilers feature construction Improvements

FLUE PASS WALLS in the Portmar rotary flame boilers now are 3/8" steel thickness and the firebox crownsheet has been built higher to permit complete combustion of gases through the new flue pass walls. The boilers are adaptable to the domestic rotary wall flame oil-burner.



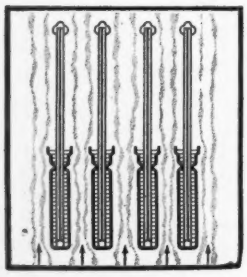
The units are vertical in design, requiring but little floor space, and now have a larger hearth door opening to permit easy cleaning. Boilers operate on low pressure, 15 lbs. steam and 30 lbs. water. Steam radiation ranges from 320 to 900 sq. ft.; water radiation from 510 to 1,440 sq. ft.; Btu outputs from 77,000 to 216,000 Btu/hr. Each boiler in the four sizes available is hydrostatically tested before shipment.

Made by: Portmar Boiler Co., Inc., 193 Seventh St., Brooklyn 15, N. Y.

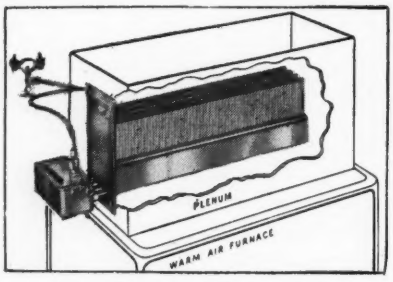
NO PLENUM

too small for the Convector Humidifier

Look! No flat bottom to restrict warm air flow. Individual water troughs (only 3/8" thick) spaced 1" apart. Means 30% more evaporation area, 60% less plenum restriction. Perfect for small-plenum, short-cycle warm air furnaces . . . conventional, counterflow and year around air conditioning units. Made of copper and brass, nothing to corrode.



Warm air flows freely between evaporation pads, picks up 30% more moisture, isn't blocked.



To install, just cut opening in plenum and make connections. 13 sizes; capacities 1 to 10 gallons of water per day.

60% less air restriction in plenum **30%** more evaporation area **50%** less installation time

See your jobber or write

MAID-O'-MIST, Inc.
3217 NORTH PULASKI ROAD
CHICAGO 41, ILLINOIS
MAID-O-MIST Inc. HEATING SPECIALTIES

NOW—

an important message to oil burner dealers with gas competition!

There isn't any question—oil is a lower priced fuel if it is burned ***efficiently.*** Your answer to gas competition is the oil burner that burns ***most efficiently.*** Hayward rotary atomizing oil burners have been engineered for superior efficiency. The results have been so outstanding that more and more dealers prefer Hayward oil-fired equipment. Let Hayward help you! Call or write:

HAYWARD OIL BURNER

HAYWARD OIL BURNER CORP.
86 Kirkland Street
Cambridge, Mass.
Factories in Brooklyn, N. Y. and Taunton, Mass.

BASIC TEST TOOLS

FOR PROFITABLE SALES AND SERVICE

Combustion testing will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown above contains precision-made, quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, adjusting any make and type of oil burner for clean, trouble-free and economical operation, or running an efficiency test which will convince even the most skeptical customer on the need for replacement or modernization.

The FYRITE Utility Kit contains instruments for measuring not only CO_2, stack temperature and draft, but smoke in the flue as well. The inclusion of the smoke-measuring instrument is a forward step of significant importance to alert heating dealers and service men. Checking the flue gas for both CO_2 and smoke makes possible to adjust the burner with speed and ease for highest possible combustion efficiency, as well as for clean burning of the fuel resulting in heating plant performance that satisfies customers and safeguards against costly service requirements.

The FYRITE Utility Kit shown above is part of the complete line of Bacharach Service Instruments for the Heating Trade which, in addition to Combustion Testing Kits, includes Temperature Recorders, Grille Velocity Indicators, Pyschrometers, and specialized oil-burner servicing equipment. Your wholesaler will gladly supply any of these instruments.

BACHARACH Industrial Instrument Company
7301 PENN AVENUE • • PITTSBURGH 8, PA.

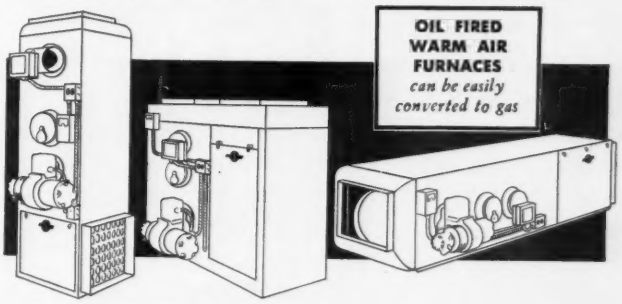
YOU ALSO GET THE

BIG SIZES

in the BESSER line!

A COMPLETE RANGE OF SIZES . . .
from 75,000 BTU to 500,000 BTU

A COMPLETE LINE OF MODELS . . .
Horizontal • Vertical • Basement
Downflo • HiBoy • LoBoy • Suspended



Plus SPECIAL ORDER SERVICE
***on any size unit* UP TO 1,000,000 BTU**

For jobs that require units larger than 500,000 B.T.U., Besser offers fast, reliable Special Order Service. We have the facilities to build any type unit required, up to 1,000,000 B.T.U. output. Every "special order" is built to the same high standards of the regular Besser line. Whatever your need, we can build it!

And now! **A NEW PROFIT-MAKER JOINS THE BESSER LINE**

Revolutionary

HORIZONTAL Summer AIR CONDITIONERS

for Residential or Commercial installations

Combining space-saving "horizontal" design with an entirely new cooling principle, Besser Summer Air Conditioners bring central air conditioning within the reach of almost everyone. Designed for installation and operation in conjunction with central heating systems, units are fully adaptable to either warm air or hot water heating. Greatly increased efficiency lowers initial and operating costs through use of smaller units.

Available in 2, 3 and 5-Ton units.

"Only the BEST goes into a BESSER!"

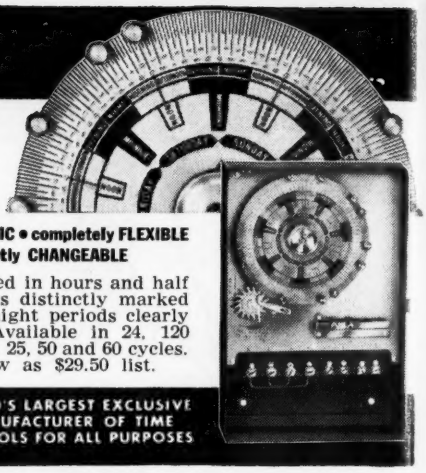
BESSER WARM AIR FURNACES
Summer AIR CONDITIONERS
The Complete Line for Year-Round Profits

BESSER METAL PRODUCTS CORP., P. O. BOX 4064, CHARLOTTE, N. C.

Here's how to **CUT YOUR CUSTOMERS' FUEL BILLS**

Always Install a PARAGON 700 Series 7-Day Calendar Time Switch

When you install a 700 Series Time Switch on a heating job, you insure economical operation — and customer satisfaction. For example, it's simple to set the dial to switch to a lower thermostat setting *automatically* Saturday noon, then switch back to the higher setting earlier than usual Monday. At the same time a regular switching schedule for night shutdown of the heating system can be maintained the rest of the week. You can accurately set operations from ON to OFF or from OFF to ON as close as 3 hours apart . . . at *different* hours each day if necessary . . . or you can omit any days desired. You can set it in advance for automatic control of a week's operations — yet make changes instantly when necessary! Send for complete details — now! Ask for bulletin No. FO-5207.



• fully AUTOMATIC • completely FLEXIBLE
• instantly CHANGEABLE

Dial graduated in hours and half hours — days distinctly marked — day and night periods clearly separated. Available in 24, 120 and 240 volts; 25, 50 and 60 cycles. Prices as low as $29.50 list.

PARAGON ELECTRIC COMPANY
TWO RIVERS, WISCONSIN

TWO RIVERS, WISCONSIN

WORLD'S LARGEST EXCLUSIVE MANUFACTURER OF TIME CONTROLS FOR ALL PURPOSES

American-LaFrance-Foamite offers improved Extinguisher

A NEW complete LINE of portable carbon dioxide fire extinguishers with a new and simplified faster acting valve in five Alfco models are now available. The models are Nos. 2½, 5, 10, 15 and 20, which numbers denote the weight capacity of the respective units.

The squeeze lever is directly over the valve stem giving quicker discharge. With a removable siphon tube it also has a side-mounted safety disc for added protection against damage. A double-prong locking pin with two locking ends prevents accidental discharge.

Made by: American-LaFrance-Foamite Corp., Elmira, N. Y.

Heat-Tane Powder is refractory Material for oilfired Systems

HEAT-TANE is a powder form refractory material that is spread evenly over combustion chamber floors to the depth of about 1". It is a heat-retaining compound and, while the burner is operating, Heat-Tane reflects the heat rays so that its crystal surfaces become white hot.

The higher combustion chamber temperatures that result bring about a more complete combustion of atomized oil and an improved flame. One application should last for an entire heating season. Renewal applications are placed on top of the worn away crystals.

Made by: Oil-Tane Corp. of America, Painesville, Ohio.

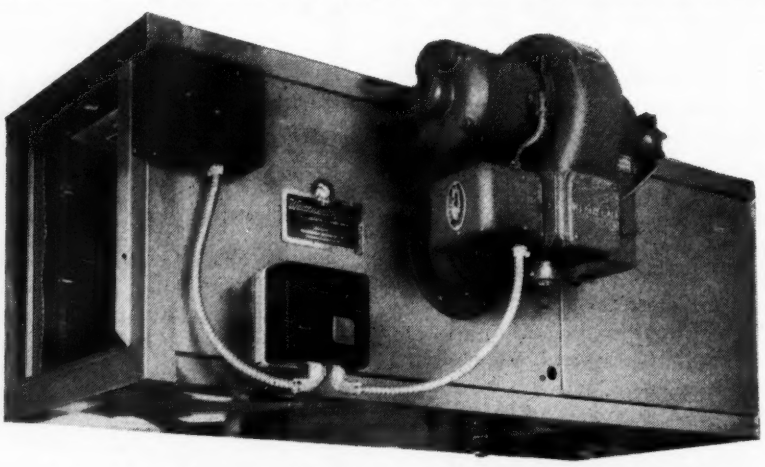
WEATHERTHERM DIRECT-FIRED OIL HEATERS

LO-BOY MODEL SUSPENDED UNIT HI-BOY MODEL

Domestic Units 80,000 To 450,000 B.T.U.—Industrial 400,000 To 2,000,000 B.T.U.

Each Domestic unit will be shipped assembled, the oil burner being shipped separately. Model AL Flanged Burner—Supplied on all Domestic units.

SUPERIOR CONSTRUCTION



QUIET OPERATION

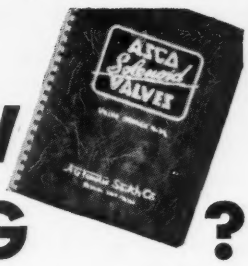
ALSO Domestic and Industrial Conversion Oil Burners 1 to 35 G.P.H.
Steel Boiler-Burner Units—3 Pass Horizontal or Single Pass Vertical

WRITE FOR NEW CATALOG

25th year ***Weatherall Engineers***

INCORPORATED
387 CHARLES STREET, PROVIDENCE 4, R. I.
MANUFACTURERS OF QUALITY HEATING PRODUCTS SINCE 1928

WANT THIS NEW CATALOG?



NEW ASCO CATALOG

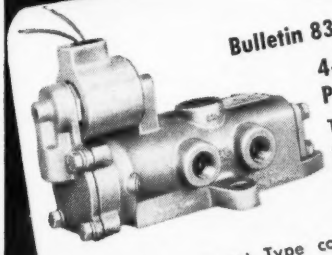
Describes Scores of Solenoid Valves

New Valve Catalog No. 24 brings you up-to-date on the extensive ASCO line of Solenoid Valves (list prices are included). New valves developed and put on the market recently are described in detail *for the first time*. A few of these are:

Bulletins 8262 and 8314
Midget Size
2 & 3-Way Packless Solenoid Valves

Midget Valves are now available with EXPLOSION-PROOF Solenoids for Class 1, Group D hazardous locations.

2-Way (Normally Open or Normally Closed) — Ports, 1/16" through 3/16"; pressures up to 1000 p.s.i. 3-Way — Ports, 3/64" and 3/32"; pressures up to 125 p.s.i. Time Delay Feature — Valves with 3½-6½ seconds delay also available.



Bulletin 8344
4-Way POPPET TYPE Packless Solenoid Valves

This valve has been thoroughly tested as a control unit in equipment requiring "plus" performance. Valve features:

Reliability — Poppet Type construction means this valve will not stick! Power stroke occurs in both directions — no spring return!

Fast Operation — 500 cycles/minute continuous duty; 750 cycles/minute intermittent duty (air).

Freedom in Mounting — Can be mounted in any position. Available 4 and 5 port; flow metering; standard or manifold mounting; ⅜, ½, ¾, and 1 inch pipe size. Handles air, water, or hydraulic oil; maximum pressure 250 p.s.i.

These two are just examples of new valve data. If you have *any* need for controlling the flow of liquids or gases in the equipment you are designing or operating, you should find this up-to-date ASCO Valve Catalog useful. Want a copy? Just drop us a note or call up and let us know. We'll be glad to send it to you . . . and extras for your associates if you desire.

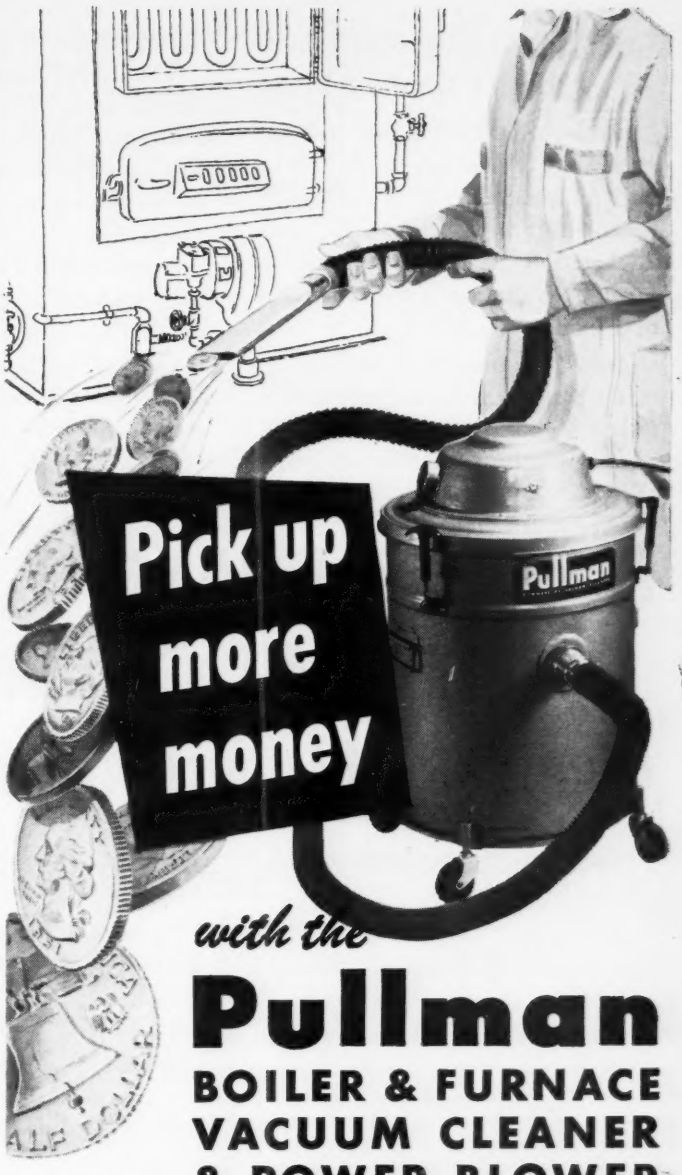
ASCO Solenoid VALVES

We manufacture a complete line of Electromagnetic Controls including Automatic Transfer Switches, Remote Control Switches, Contactors, Relays, and complete Control Panels.

V.53.1

Automatic Switch Co.

385-F LAKESIDE AVENUE • ORANGE, NEW JERSEY



with the

Pullman

BOILER & FURNACE VACUUM CLEANER & POWER BLOWER

..ONLY.. PULLMAN converts to POWER BLOWER in just 2 seconds

Get into the cellar with Pullman low cost vacuum cleaning and pick up money on sales and service jobs that develop there. Pullman has large 1½ bushel capacity, converts to power blower in 2 seconds, weighs 30 lbs., carries by one hand, has no outside bag to snag or tear, throw away paper filter keep suction powerful. Send coupon for literature.

PULLMAN VACUUM CLEANER CORP., BOSTON 19, MASS.

Pullman Vacuum Cleaner Corp., 33 Allerton St., Boston 19, Mass.

Send me literature about Furnace & Boiler Vacuum Cleaning

OHI

SIGNED _____

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

Summer Cooling Employs Boiler Heating Pipes

A THOROUGH STUDY of costs and operation of equipment which can be used for summer cooling and winter heating with hot water will be made in the I-B-R Research Home located just off the campus at the University of Illinois.

During the summer of 1953 the use of the equipment for summer cooling is being studied whereas the heating phases will be thoroughly evaluated during the winter of 1953-1954.

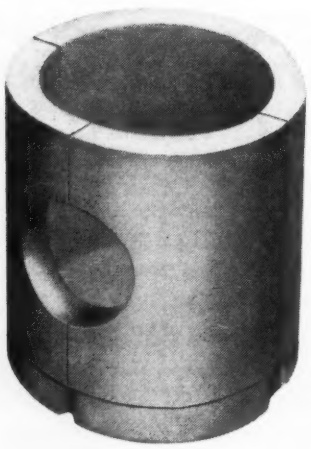
The I-B-R Research Home is a typical two-story brick veneer house with a basement. Much of the research work which led to the development of baseboard heating was carried on in this residence.

Baseboards and radiators have now been replaced by convector-like units in all six rooms of the building. In the winter, warm water will be circulated through these convectors by means of a pump installed near the boiler in the basement.

In the summer, chilled water from a water-chiller also located in the basement will be forced through the units.

The same piping will be used for warm water in the winter and cold water in the summer.

Do Your PRESENT PRECAST CHAMBERS Give You ALL these Advantages?



1. Low initial cost.
2. Low installation cost — only 5 pieces to assemble.
3. K-factor equal to insulating brick.
4. Excellent performance with either high or low pressure burners.
5. Scientifically packed to prevent breakage.

. . . if the answer is NO -- contact us NOW!

KOLB REFRACTORIES COMPANY Meadow & Jackson Sts. Philadelphia, Penna.

KolbKast Insulated Chambers

❖

Sales Appointments

Byron S. Snowden has been appointed merchandising manager for trucks, Dodge Div., Chrysler Corp., Detroit, Mich.

Everett J. Ryan named New England division manager of industrial fueloil sales for Pocahontas Fuel Co., Inc., Salem, Mass.

Robert E. Davis appoined manager, Chrysler Airtemp's St. Louis regional sales office.

Barton B. Dawes to area sales manager for Silent Automatic Products, Timken Silent Automatic Division, covering eastern Ohio, western New York, Pennsylvania, Virginia and West Virginia.

Howard W. Rush upped to manager, Washington, D. C., branch sales office, The National Radiator Co., Johnstown, Pa.

John T. Lordan and *Don J. Edwards*, operating as Lordan and Edwards Co., Newton 58, Mass., now represent Hold-Tite Valve Mfg. Co., New York 36, in all of New England; also, *George* and *Al Greulich* now represent Hold-Tite Valve in Michigan.

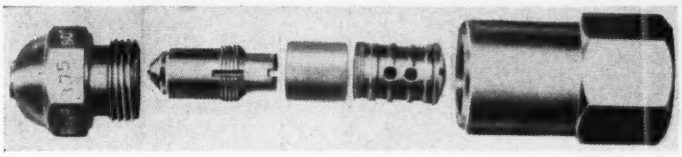
Howard Haug named field representative for Williams Div., Eureka Williams Corp., Bloomington, Ill., for territory including parts of Maryland, Ohio, Pennsylvania and West Virginia.

Cloyd C. Weaver now sales manager for International Heater Co., Utica, N. Y., in eastern Ohio area.

Peter J. Dalton to manager, Chrysler Airtemp's Detroit sales region.

Herbert A. Fowler named manufacturers' rep for Sun-Ray Burner Mfg. Corp., Jamaica, N. Y., covering all of Maine.

Edward J. Allard appointed to manufacturers' rep by Nu-Way Corp., Rock Island, Ill., for all New England.



PERFECT PERFORMANCE,

ACCURATE CAPACITY RATINGS AND SPRAY ANGLES

ARE THE NATURAL RESULTS OF OUR

PRECISION WORKMANSHIP

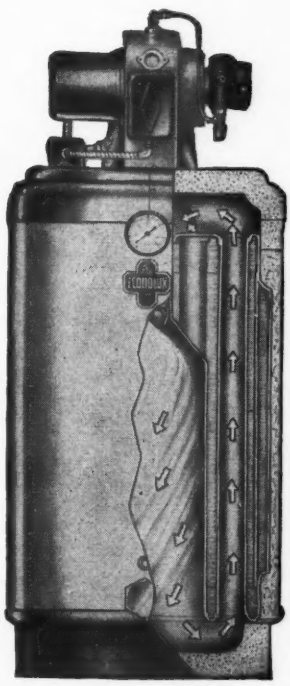
in the nozzle field

PRECISION MEANS *Hago!*

Hago Products **1281 SPRINGFIELD AVE., IRVINGTON 11, N. J.**

In Canada—Richardson Distributors, 15 Brule Gardens, Toronto

A "midget" that does a whale of a* two-way *heating job!



The ECONOLUX is easy to sell, easy to install, easy to service. It comes to you completely assembled—all ready to hook up to water, power and flue lines.

JOHNSON'S

ECONOLUX 150-VW

Supplies abundant Hot Water Heat and ample faucet Hot Water for a 10-room home!

This amazing "midget" is making lots of new friends among both users and sellers. In spite of its compactness (it's only 24"x60" in size) it generates 150,000 B.T.U. output total . . . all the heat a good sized home in a cold country can use—and from a separate, outer-jacket compartment, it supplies automatic, day-and-night hot water as well.

Homeowners are delighted with its capacity . . . and amazed at its low fuel-consumption and efficiency. If you need an automatic heating-and-hot-water unit for domestic use . . . you ought to check up on the performance and the cost of this new Econolux.

ALSO AVAILABLE FOR STEAM RADIATOR SYSTEMS

ECONOLUX Model 150-VS

For use with steam heating systems, the ECONOLUX 150-VS is built without the outer water-heating jacket. Otherwise it is the same as the ECONOLUX 150-VW in size, capacity and operation.

Johnson Oil Burners

Builders of fine Oil Burner Equipment since 1903

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
Church Road, Bridgeport, Pennsylvania

Dale Barnstable added to the sales force of American Air Filter Co., Inc., Louisville, Ky.

Charles Rapiport named general sales manager of Transformer and Electronic Divisions, Union Electric & Mfg. Co., Jersey City.

H. H. Falkingham and *W. H. Grant* appointed as home heating and cooling sales reps, Air Conditioning Div., General Electric Co., Bloomfield, N. J.

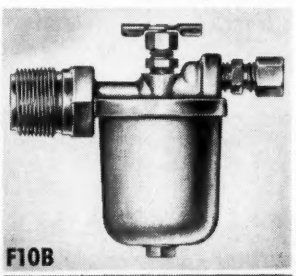
Frank W. Boone now responsible for handling special sales problems of original equipment manufacturers and distributors who use and sell Amerglas filters manufactured by American Air Filter Co., Inc., Louisville, Ky.

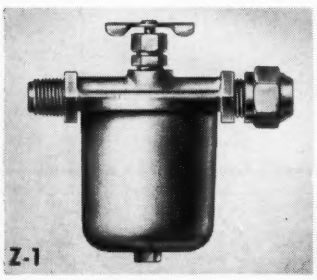
A. James Hackl as manager Dallas sales office for The Trane Co., La Crosse, Wisc.

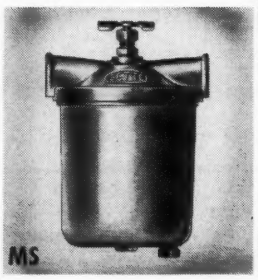
Darold Sailor and *F. Harold Wasson added* to Chicago sales district, Perfection Stove Co., Cleveland 4. Also, *T. W. Barrineau* joins Perfection's Atlanta, Ga., sales district.

SETTE Microstone* Element FILTERS

Provide Maximum Filtration Longer ...Without Attention!







The secret lies in the use of a scientifically designed "Ceramic Element". The Ceramic Microstone Element... used in every SETTE FILTER...repels foreign matter instead of enmeshing it ...can be cleaned and reused...quickly, easily replaced once a year at low cost.

SETTE FILTERS...

● Stop foreign particles down to 1/10,000 of an inch ● Are easily installed ● Handle flow capacity from 2,000 to 10,000 gallons per year, depending on model, without cleaning or replacing Microstone Element ● Are available in correct capacity for every space heater, water heater, kitchen range, furnace, or other oil burning installation ● Offer practically no flow resistance ● Can be cleaned in three minutes or less ● Provide greater customer satisfaction ● Minimize service calls.

Model F10B—List Price **$2.80 each**
For small to medium installations. Fits tank or drum.

Model Z-1— List Price **$2.80 each**
For small to medium installations. Fits ALL control valves.

Model MS— List Price **$4.80 each**
For medium to large installations.

Model KS— List Price **$7.80 each**
For the largest, dirtiest jobs.

Only filter featuring Pre-Screening

DEALERS: If your jobber cannot supply you, order direct. Supplied postpaid anywhere in the U.S.A. Normal discount in dozen lots.

DISTRIBUTORS: Some valuable territories still available. Write today!

SETTE *TRADE MARK

Feature, sell and install...
MICROSTONE ELEMENT FILTERS
Write for full details now...

Marquart MANUFACTURING COMPANY
1241 HIGH STREET, OAKLAND 1, CALIF.
EXPORT DIVISION — OCEANIC EXPORT COMPANY
400 MONTGOMERY ST., SAN FRANCISCO 4, CALIF.

Manufacturers' Activities

A-P Controls test Products in new engineering Laboratory

HUNDREDS of automatic control devices, from such diversified units as tent heaters for GI's in Korea to the latest in passenger car air conditioning, undergo all kinds of experimental tests in the recently completed engineering laboratories of the A-P Controls Corp., Milwaukee, Wisc.

The Milwaukee firm is completing a program resulting in a greatly expanded engineering and research schedule at its main plant. A new, modern structure now houses most of the firm's engineering activities, and includes offices, design and drafting rooms, laboratories, conference rooms and an experimental machine shop.

The new addition provides for more test rooms with automatically controlled temperature and humidity conditions.

Sid Harvey is Host to 500 at open House during June

DURING THE MONTH OF JUNE, 500 dealers and service men were guests of Sid Harvey, Inc., Valley Stream, N. Y. They were invited to spend the entire day inspecting the rebuilding processes of the plant.

Part of the one-day tour included a trouble shooting lecture on servicing Oil-O-Matic low pressure oilburners. Lecturers Bob Mitchell and Les Algar were aided in their discussion by various cutaway models and numerous slides illustrating the internal workings of the burners loaned to them by the Williams Oil-O-Matic organization.

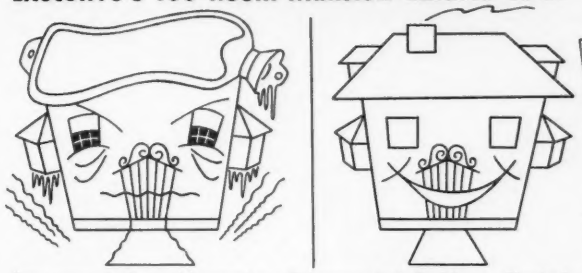
Autocar opens $200,000 Branch for sales in Charlotte, N. C.

A NEW $200,000 SALES AND SERVICE HEADQUARTERS has been opened by The Autocar Co., Ardmore, Pa., for its Charlotte, N. C., branch of which E. R. Rowland is district manager.

The new one-story brick-and-glass front building has a total floor area of 16,600 sq. ft.

The front section of the building houses 1,200 sq. ft. of spacious, air-conditioned, soundproofed, fluorescent-lighted administrative, clerical and sales offices.

Executive's 100-Room Mansion Catches Cold!



Sure remedy for cold mansion—3 burners installed by an Electrol dealer to supply heat for both living space and three 500-gallon copper hot water tanks. Patient's doing fine . . . thanks to Electrol.

4687

ELECTROL ALWAYS AT YOUR SERVICE

With Electrol's complete line and free engineering service, you're safe to tackle any heating problem, big or small.

Electrol's free catalog tells you about advanced selling features . . . extra dividends . . . powerful selling aids . . . expert engineering service. Write for Electrol catalog today. No obligation.

Electrol Burner Mfg. Co., Inc.
22 Union Avenue, Rutherford, N. J.

Kleer-Kleen Furnace Co. opens new, modern Plant in Hayward

COMPLETION of a modern new plant at Hayward, Calif., designed to facilitate the production of oilburners, floor furnaces and oilburning equipment, has been announced by the Kleer-Kleen Mfg. Co., Hayward. Kleer-Kleen was formerly located in Oakland, Calif.

Charles Curtiss, president of Kleer-Kleen, reports that his firm was a pioneer in the development of fully automatic oilburning floor furnaces equipped with electric ignition. Also, his company was the first to introduce the "Easy Access" type of floor furnace which permits service and repairs from the floor level.

Philadelphia Site for M-H's new Mid-Atlantic Office

A NEW MID-ATLANTIC regional office, a two-story office building consolidating sales, service and engineering has been opened in Philadelphia by the Minneapolis - Honeywell Regulator Co., Minneapolis.

The $300,000 building features a conference room, special office lighting to provide 50-foot candles of illumination at desk level, complete soundproofing and a heating and air conditioning system controlled by the company's pneumatic control system. To facilitate factory-branch sales, the new building has a separate customer entrance from the parking lot.

More profit per service call!

Klemm

FUEL OIL FILTER

It's easy to sell your customers on heating comfort and uninterrupted service with trouble-free Klemm Fuel Oil Filter. Unique Chemistone filter element positively traps all sediment, rust, water, etc.—leaves oil pure and clean!

Model 430G

- Easy to install
- 4 models—for every type of burner
- Available in metal or glass
- Low cost
- Guaranteed performance
- Metal bowl models listed by Underwriters' Laboratories

Order today from your jobber!

Klemm PRODUCTS
DIVISION OF
KLEMM AUTOMOTIVE PRODUCTS CO.
1718 NORTH DAMEN AVENUE • CHICAGO 47, ILLINOIS
Export Division: Guiterman Co., Inc., 35 S. William St., New York, N. Y.
In Canada: Elgee, Ltd., 410 Hopewell, Toronto

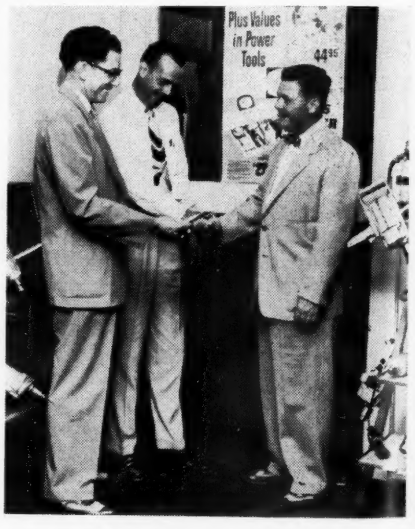
Pictured here *are staff memebrs of Iron Fireman Mfg. Co., Cleveland; United Film Service, Inc.; and Joseph R. Gerber Co., advertising agency, during production of a new series of 13 films designed for motion picture and television advertising of Iron Fireman automatic heating equipment. Advantages of automatic heating are graphicaally presented. Films solely for TV presentation run 20 seconds, including the dealer's signature; films for either motion picture or TV showing run 40 seconds, including the dealer's signature. Entire cost of the films themselves has been paid by Iron Fireman.*

HOW ABOUT THAT?
CHETWOOD.... THE OIL BURNER DEALER HEARS FROM AN OLD FRIEND.....
GUESS WHO INVITED US TO DINNER TONIGHT? THE SQUATWELLS! I HAVEN'T SEEN GOOD OLD SASAFRAS SQUATWELL IN YEARS! WE'LL HAVE A WONDERFUL EVENING, FLOBINA!
SO... AFTER THE DINNER.... WHAT GIVES?
I HEARD YOU WERE IN THE OIL-BURNER BUSINESS AND I FIGURED MAYBE YOU COULD FIX MY BURNER! I'M SURE YOU'D DO A GOOD JOB FOR AN OLD PAL! HOPE I GOT THE RIGHT TOOLS! C'MON DOWNSTAIRS, I'LL GET YOU SOME OVERALLS!
H.T. ELMO

Nameplate Decals to refer Customer to authorized Dealer

A SPECIAL heat resistant decal nameplate for installation on the furnace plenum has been developed by the Meyercord Co., Chicago 44, Ill., to permit the authorized factory dealer to imprint his name on the unit. This is so the name of the dealer who originally installed or serviced the unit will not be forgotten by the customer.

Distribution of the decals will be made through the equipment manufacturer at a slight cost to the dealer, the Meyercord Co. reports.



G. R. Mims *(center), salesman for the Southern Oxygen Co., reads a telegram saying he has won first prize in a national sales contest conducted by Portable Electric Tools, Inc., Chicago. Prize is an all expense paid trip for two to Honolulu. Phil Vest (left), of Heco Products, Johnson City, Tenn., PET representative in the area, and Howard Snuggs, sales manager of Southern Oxygen, offer congratulations.*

CONVERSION JOB *Tips*

Lower Oil Bills for your customers

Higher Profits for You

"What will it cost me for oil?"

Here's one question every homeowner asks when considering a conversion job.

If you have included a B&W Insulating Firebrick Firebox in your estimate, you can offer this benefit to your prospects:

Fuel savings of up to 25% have been made by homeowners who replaced inferior fireboxes with one made of B&W Insulating Firebrick—*the lightest weight brick of its type made today.*

This lightest weight refractory, combined with proper size and shape of firebox, assures your customers of:

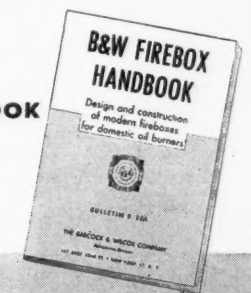
1. ***Fuel savings***
2. ***Practically no odor, soot or smoke***
3. ***Smoother, quieter burning***
4. ***Instant response to thermostat demands***

Follow this lead to increased sales and profits—by showing your customers the benefits of B&W Fireboxes.

Send today for the

B&W FIREBOX HANDBOOK

a valuable guide for every installer



THE BABCOCK & WILCOX CO.

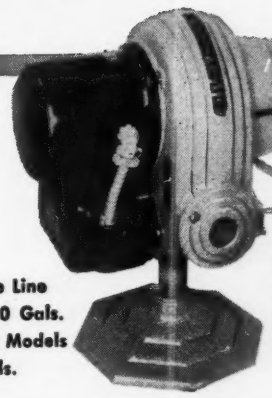
REFRACTORIES DIVISION

General Offices: 161 East 42nd St., New York 17, N.Y.

Works: Augusta, Ga.

R-484

REACH OUT FOR MORE SALES WITH *Radiant*



A Complete Line from ¾—30 Gals. Shell Head Models ½—10 Gals.

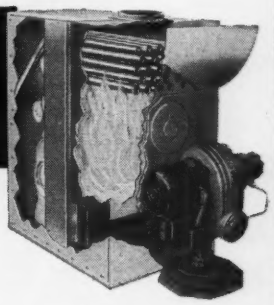
RESIDENTIAL
COMMERCIAL
INDUSTRIAL

Every PROFIT Reason Says—BUY RADIANT!

Performance—Equal to the highest priced burners. Price — Meets competition every time . . . *plus* — Low Upkeep — Factory Guarantee . . . National Distribution . . . Protected Territories . . . Easy Installation . . . Minimum Servicing.

THE *Radiant* OIL FIRED WINTER AIR CONDITIONER

Precision Engineered for Economy in Price—Installation—Operation



SUPERIOR DESIGN — Tubular construction presents greater heating surface to flue gases than conventional furnaces . . . jacket is substantial and well finished . . . high temperature combustion chamber . . . motor driven blower unit and air filters.

FACTORY ASSEMBLED—Shipped complete with combustion chamber installed and jacket completely assembled.

Available in Four Models: Low Boy, Suspended Unit, Hi Boy, Counterflow

WRITE FOR COMPLETE RADIANT LITERATURE.

You'll sell— and profit more!

RADIANT UTILITIES CORP.

8815 18th Avenue, Brooklyn 14, N. Y.

RADIANT OIL BURNER

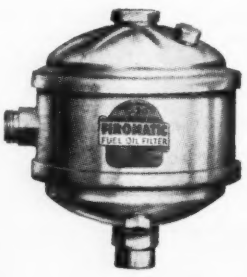
Coleman Dealers complete University short Course

MORE THAN 1,000 Coleman dealers from every state in the union earned certificates from the University of Wichita for completing a special home heating and airconditioning short course sponsored by the Coleman Co., Wichita, Kan., in cooperation with the university's College of Adult Education.

Twenty-three classes were held, each lasting for one week and consisting of nearly 40 hours of classroom and laboratory training at the university and in the Coleman Heating Institute.

The photograph shows the 23d and final class of the season arriving at Wichita. Coleman's Ed Johnson greets the students, dealers from Pennsylvania, New Jersey, Delaware area, as they arrived from Philadelphia aboard a chartered Super Constellation.

Firomatic
PRODUCTS
VALVES • FUEL OIL FILTERS • SAFETY DEVICES



THE PRODUCT OF THE MONTH

FIROMATIC FUEL OIL FILTERS . . . provide greater filtering capacity —more filtering area. All are constructed of heavy gauge steel; hot tin dipped inside and out to prevent corrosion.

A Drain Plug at the bottom permits easy replacement of cartridge without messy spilling of oil and makes possible the draining off of sludge without removing filter from the line.

A Bleeder Plug at the top provides easy removal of air from the line.

Firomatic Fuel Oil Filters are made in two sizes, adaptable for all service.

"You Can Pay More, But You Can't Buy Better"

SEND FOR COMPLETE CATALOG "F"

THE MORSE-SMITH-MORSE CO.
165 Dexter Avenue
Watertown, Mass.

SOLD NATIONALLY
BY JOBBERS ONLY

Torrington Mfg. Co. starts Construction of new Plant

THE START of construction of a half-million dollar plant addition has been announced by the Torrington Mfg. Co., Torrington, Conn.

Better than 46,000 sq. ft. of additional floor space will be provided under the firm's modernization and expansion program. The new single-story facility is expected to be completed before the end of this year.

Plans also are being completed and ground will be broken soon for a new plant for Torrington's Canadian Oakville subsidiary.

G-E shifts heating & cooling Department to Trenton, N. J.

AIR CONDITIONING DIV., General Electric Co., Bloomfield, N. J., has announced that part of its home heating and cooling department will be transferred from Bloomfield to Trenton, N. J., in a move to expand production facilities and meet increasing demand for home air conditioning.

F. J. Van Poppelen, general manager of the G-E Air Conditioning Div., said that the move to Trenton will also allow the Division to utilize facilities vacated by the home heating and cooling department for expansion

of production of packaged air conditioning units and water coolers for commercial and industrial use and the G-E packaged heat pump.

York-Shipley's Ads in FO&OH win 1953 Award of Excellence

FOR ITS BUSINESS PAPER ADVERTISING in merchandising publications, which appeared in the pages of FUELOIL & OIL HEAT, York-Shipley, Inc., York, Pa., was presented the Award of Excellence in the 1953 creative competition of the National Advertising Agency Network.

Presentation of the award was made at the 22d Annual Management Conference of the Network, held at the Broadmoor Hotel, Colorado Springs, Colo. The award certificates and confirming documents were presented to representative of The W. H. Long Co., York, the agency for York-Shipley.

Two hundred ninety-nine entries were received. A board of judges, under the direction of Prof. Lloyd D. Herrold, chairman of the Department of Advertising, Northwestern University, Chicago, selected the winning entries.

New Shell Oil Refinery at Anacortes, Wash.

ANACORTES, WASH., has been chosen as the site for a new Shell Oil Company refinery, it was announced by the Shell Oil Co., New York 20, N. Y.

R. W. McOmie, Shell's West Coast Refinery Coordinator, stated that engineering studies developed the availability of adequate water, power, and harbor facilities at March's Point. March's Point is on the outskirts of Anacortes.

Construction will take place in several steps, the first of which is the clearing and preparing of the site. In the meantime, process design and negotiations with contractors are proceeding and further construction developments will be announced soon.

Apprentice Steamfitters hold field Trip at Bell & Gossett

TWENTY STUDENTS, all apprentice steamfitters attending the Wisconsin Schools of Vocational and Adult Education, recently toured the plant of the Bell & Gossett Co., Morton Grove, Ill.

The field trip, an annual affair, is part of the student's 500-hour vocational training program. Harry R. Henke, advertising manager of Bell & Gossett, acted as host during the visit.

The students, according to their instructor, M. W. Huguet, are indentured for a period of five years to joint apprentice steamfitter committees in their localities. The committees, composed of an equal number of master and journeymen steamfitters, act in an advisory capacity to the state's vocational schools.

American Flexible Metal Hose described in 16-page Catalog

THE AMERICAN BRASS CO., Waterbury 20, Conn., has published a 16-page, illustrated "Quick Reference" catalog, describing American Flexible Metal Hose and Tubing.

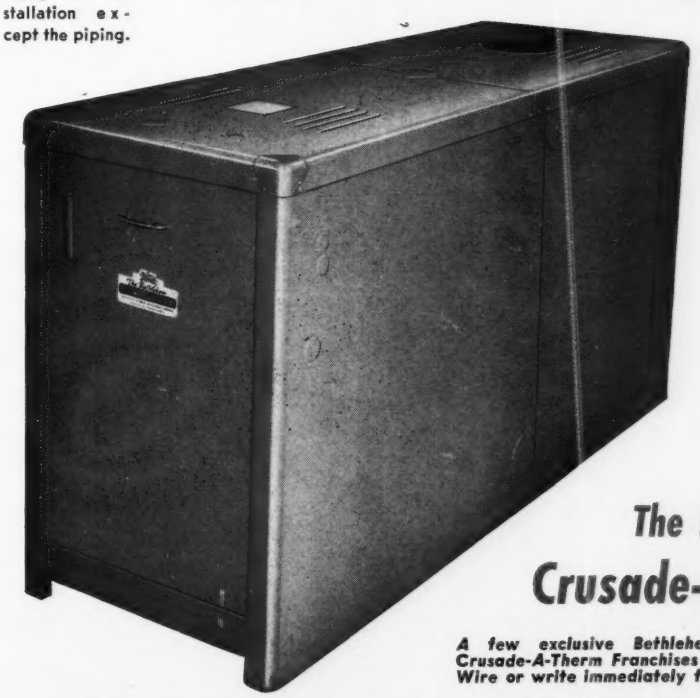
The catalog shows wide range of available alloys and sizes, suggested applications and furnishes data on hose and fittings.

MAKE BIG MONEY

selling TWO of the BIGGEST automatic HEATING VALUES in America

The Bethlehem DYNATHERM

Both Units come completely equipped with everything, ready for installation except the piping.



The Bethlehem DYNATHERM is designed to meet all the requirements of the larger home . . . the Bethlehem CRUSADE-A-THERM — the average size home.

The Bethlehem Crusade-a-Therm

A few exclusive Bethlehem Dynatherm — Crusade-A-Therm Franchises are still available. Wire or write immediately for full information.

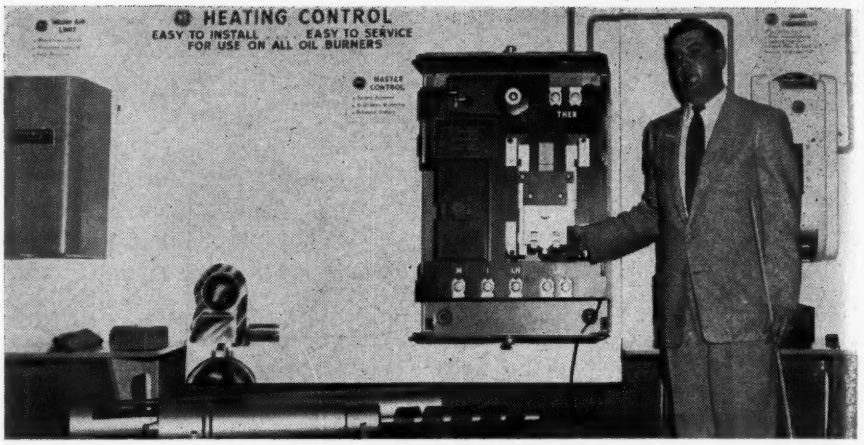
BETHLEHEM FOUNDRY & MACHINE COMPANY

BETHLEHEM, PENNSYLVANIA

G-E to tour Country with Show on domestic heating Controls

A YEAR-LONG, coast-to-coast tour has been launched by the Appliance Control Department, General Electric Co., Schenectady 5, N. Y., to introduce its new line of oilburner controls to home heating dealers, contractors, and servicemen throughout the country.

Scheduled to make more than 150 stops, the "Bandwagon" will appear before an estimated audience of 20,000 people responsible for the selection and



installation of domestic heating controls.

The first showing was held in Springfield, Mass., July 28. The tour has either already visited or will visit such cities as Boston, New York, Cleveland, Chicago, Detroit and St. Louis. Plans are to wind up the tour on the west coast next year.

Against a background of giant models of the new controls, takeapart sessions familiarize the guests with the devices, and a newly completed motion picture, "Control of Tomorrow," is shown. Musical skits, comedy acts, bathing beauties, and magic tricks are interspersed in the two and one-half hour presentation which is centered around a "workshop" on heating controls.

Wayne adds assembly Line for burner Production

AN ADDITIONAL oilburner assembly line was placed in operation on July 10 by the Wayne Home Equipment Co., Inc., Fort Wayne, Ind. Designed for 400 units per day, it is to provide production for both high pressure and low pressure Wayne conversion and original equipment models E and EL. L. Thompson, factory manager, described the line as consisting of a 250-ft. overhead conveyor carrying cast aluminum fan housings and steel air tubes through the painting department and to the assembly line.

Line assemblymen join fan housings and motors on a conveyor belt fixture which moves the units through stations where other components are added. Line inspections include actual operation of every unit to gauge-test for motor, ignition, noise, fuel pressure and leakage.

Nu-Way
OIL HEATING EQUIPMENT
A TRADEMARK WITH FIRE IN ITS EYE
Here's a trademark symbolizing all that's inherent in dependable, efficient heating — an eternal flame emblematic of the continual search for new methods to produce more and better heat at lower cost. It's the trademark of The Nu-Way Corporation, Pioneers in the design and manufacture of economical oil burners . . . exclusive manufacturers of oil burners for 32 years. It's the trademark that means integrity and dependability in all business associations and in oil burner performance. Each year more and more Nu-Way burners are sold by jobbers, by dealers and as a part of products of leading furnace and boiler manufacturers.
Nu-Way CORPORATION
ROCK ISLAND, ILLINOIS
"Automatic Oil Heat Exclusively Since 1921"

*and naturally they're using

STANDARD'S NEW

Perimeter Floor Register

with Standard's exclusive

DIALAMATIC CONTROL

*This is it!

Model No. PH-142

Works Better

Made Stronger

SPECIFICATIONS

The face and blades of model PH-142 are fabricated of 16 gauge steel, the blades are set in a fixed-fan angle degree for even deflection. The frame is of one piece, 18 gauge steel construction. The Louvre box fabricated of 16 gauge steel. Packed one to a box, and 20 to a master carton. Comes handsomely finished in gleaming, durable metallic-lustre. 4 sizes available.

For more information and Standard's New Pocket Catalog, attach this coupon to your business letterhead and mail to:

Standard Stamping & Perforating Co.

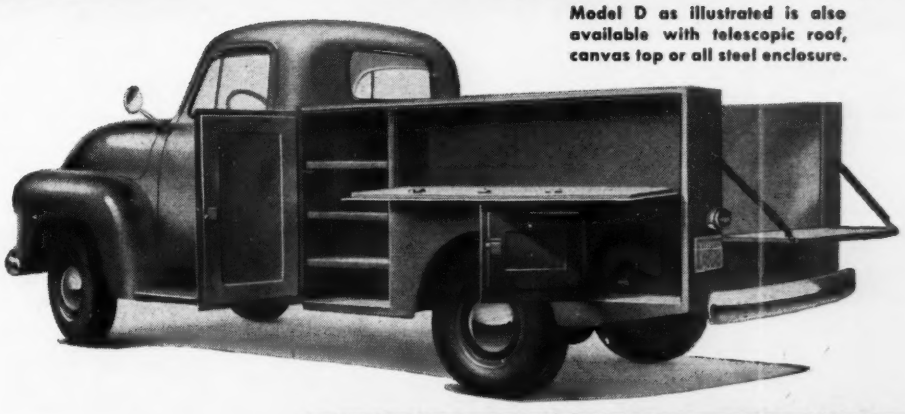
3119 WEST 49TH PLACE • CHICAGO 32, ILL.

GREATER STRENGTH • UTMOST SECURITY • LOWEST COST • HIGHEST VALUE

SPECIALIZED UTILITY BODIES FOR ALL PURPOSES

"Bodies you can depend on" result from the skill, quality and integrity that goes into every Morysville unit. Made by expert craftsmen from 14 and 16 ga. body steel on heavy U channel under structure these bodies are the strongest in the industry.

Model D as illustrated is also available with telescopic roof, canvas top or all steel enclosure.



MORYSVILLE Body Works

513 SO. READING AVE.
BOYERTOWN, PA.

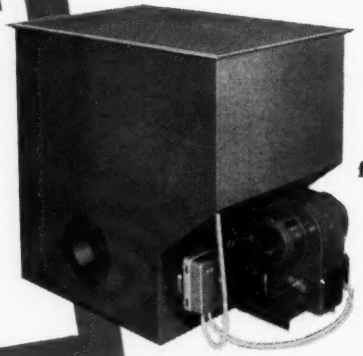
All compartments are weather sealed. Perfect fitting doors with recessed spring loaded locks and many other advanced features to meet your particular requirements.

WRITE FOR CATALOG AND PRICES.

DISTRIBUTORS IN PRINCIPAL CITIES EAST OF THE MISSISSIPPI

More Proof that KLEER-KLEEN is First with the Finest

Now . . .
PRESSURE BURNERS
Available in
KLEER-KLEEN
FLOOR FURNACES



Distributorships Available in Some Areas

All KLEER-KLEEN Pressure Burner Floor Furnaces are **Listed and Labeled by Underwriters' Laboratories, Inc.** — an added measure of safety and protection!

Now . . . 4 Floor Furnaces with PRESSURE BURNERS for Medium and Larger Sized Homes—70,350 and 83,000 Btu/hr heat output.

These modern KLEER-KLEEN Pressure Burner Floor Furnaces outperform many of the larger, more expensive heating units now on the market.

KLEER-KLEEN MANUFACTURING COMPANY
140 ORCHARD AVENUE HAYWARD, CALIFORNIA

Readers' Problems

Q. Would you give me your recommendation for piping two 550-gallon tanks using one suction, one return line, and one tank gage for both tanks? What would be the best way to equalize the two tanks? No. 2 fueloil will be used.

B. B. L., Lemoyne, Pa.

P.S. Would you have any books on service and installation of No. 5 and No. 6 oil jobs?

A. First, use identical 550-gallon tanks and, highly important, make certain their bottoms and tops are at precisely the same levels.

Second, provide a suction line for each tank and run both lines into the basement through the foundation wall. This avoids pipe joints and possibilities of leaks in buried piping. Inside the basement, at the foundation wall, tee the two suction lines together, then run one suction line from the tee to the burner. Install an excellent check valve in the suction line to the burner. For successful operation, the suction lines must all be absolutely air-tight, leak-proof.

Third, run a return line from the burner to either tank. The identical suction lines will equalize the level of oil in the two tanks even though oil is not returned by the burner to both tanks. Provide a tank gage for the second tank to fill when oil is delivered.

Fourth, use the Scully system for filling. Provide a 2" fill line for the first tank, a 2" cross-over pipe from the first tank to the second, and a 1¼" vent line for the second tank. Scully recommends a VENTALARM for the second tank.

P.S. Our new book, "Commercial Industrial Oilburning," price $2, probably is precisely the book you desire.

Q. Having been brought up in the oilburner business under the tutelage of men employed by a burner manufacturer who believes in only continuous ignition for gun burners, now I am accused of being narrow-minded because I insist on continuous ignition for all my new burners, doing this in the interests of maximum safety. Not narrow-minded, I ask you to list the objections to continuous ignition.

B. R. N., Manhattan, N. Y.

A. You bring up moot questions. The matter of continuous versus in-

ONLY McCORKLE CONTROLS
for Vaporizing Oil Burners
give you this combination of vital features

- **Patented dual blade bi-metal assembly—insures trouble-free operation—supplies a wide margin of *extra* power.**
- **More rapid heat transmission.**
- **Snap acting Micro-switch.**
- **Heavier, more rugged construction.**
- **Less service—greater customer satisfaction.**

We will gladly furnish literature and specifications for your particular requirements. Write us today!

D. H. McCORKLE CO.
Box E, Station A Berkeley, California

termittent ignition for pressure burners can be discussed only. It cannot be decided by anything we can tell you.

A few of the objections to continuous ignition cited often by those favoring intermittent ignition:

According to their manufacturers, certain modern combustion heads are not suitable for use with continuous ignition. Following the instructions of the manufacturers of these combustion heads rules out continuous ignition for jobs using these heads.

Continuous ignition tends to overheat atomizing nozzles on certain jobs.

Radio interference, though rare today because of oilburner and ignition transformer design features that tend to prevent it, still is encountered today on exceptional installations. Such interference is far worse when given by continuous-ignition burners than when given by intermittent-ignition burners. Dealers installing continuous-ignition burners often must install radio-interference traps and use other steps to end complaints about radio interference.

Certain continuous-ignition burners need adjustment from time to time because their spark points gradually shorten.

Continuous - ignition installations use a little more electricity than intermittent-ignition installations.

Personal opinion necessarily enters into judging the validity and importance of such objections to continuous ignition, even as it does in discussing the objections to intermittent ignition. This argument has two sides. We are not a champion of either side. We know of instances where for good reasons intermittent ignition was changed to continuous, and of other instances where for good reasons continuous was changed to intermittent ignition. The burner experts who made the changes were not ready to do-or-die for either continuous ignition or intermittent. They were willing to use either type to match the peculiarities of a particular installation.

Q. Call them bungalows, ranch-type homes or what you will, one-story houses are giving too much chimney-draft trouble because they have insufficient chimney height. The trouble increases greatly without a basement, with the furnace in a ground-floor utility room, for then 10 ft. is deducted from chimney height of a similar house with a basement.

How much draft should you be able to get in the smokepipe of a small furnace, fired at 1.0 gph by a gun burner, with the draft regulator blocked so draft is maximum?

A. C. W., Ridgewood, N. J.

A. The numerical answer to your question has decreased and decreased throughout the years during which oilheating gained its popularity. About 15 years ago, a chimney was considered good in the eyes of many oilheating experts only if it could develop at least .10" smokepipe draft under the conditions you describe, of course with the burner running. Then .07" was considered all right.

Today, many oilburner men say a maximum smokepipe draft of .05" is indicative of a good chimney. We've heard of no lower acceptable number so far. On this basis you can declare the chimney inadequate if when hot as a result of running the burner it will

THE DIFFERENCE MAKES
EXTRA SALES FOR SINCLAIR JOBBERS

SINCLAIR ANTI-RUST FUEL OIL
SO DIFFERENT IT'S PATENTED

Contains the amazing rust inhibitor RD-119...
which
Protects against corrosion and rust-clogged
filters and burner nozzles...
Reduces service calls...Builds good will and SALES.

SINCLAIR
FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

not develop .05" or higher smokepipe draft with a swinging-disc draft regulator fastened in its closed position or otherwise kept closed.

Q. We just read that building occupants should live in rooms not cooler than 70° and not hotter than 70°. This does not agree with what I was taught a few years ago: that summer airconditioning should not decrease the temperature of an office building, for example, to lower than 15° below the outside temperature measured in the shade. Should I now switch to designing airconditioning systems to a design basis of 70° inside on hottest days?

L. D., Manhattan, N. Y.

A. You should not, according to the opinion of many, many engineers who are planning airconditioning systems today. Certain engineers are working in the direction of installing lower-powered systems than they installed up to now, and which would result from using your 15-degree design basis, and of having the smaller systems operated many hours a day—continuously 24-hours a day during hottest weather. To read is good, but don't believe and act on everything you read!

Q. Didn't think this possible because I've installed big tankless water heaters for years, but I'm in trouble because my adding a tankless to the steam boiler in a 27-family apartment house overloads the boiler. Job is unusual, I now find out, for in every apartment there's about six boarders who start wasting hot water about 6:30 each morning. At that time, boiler cannot develop steam pressure (it does later), can't make enough steam for radiation load, and many radiators far from boiler remain cold for two hours. Heat is needed in every room at 6:30 a.m. to 8:00 a.m. to avoid complaints. A big open-all-night cafeteria in the building makes water heating load much greater during the critical hours, worsening my headache.

I wanted to put a gun burner using No. 2 oil in the old boiler used just for heating water—the boiler good for firing at 2.0 gph and the old 1,500-gallon hot water tank are still in place. But I sold the owner so thoroughly on the economy of heavy oil (now used in heating boiler) compared to light oil that he won't let me install the burner for No. 2 oil. You publish answers to many unusual problems, and I hope you can give me a few new slants on solving this problem best.

S. J. S., Brooklyn, N. Y.

A. As you realize, this job is extremely exceptional in that (a) the boiler is scarcely large enough to heat the building, and (b) the water heating load is extremely large for the size of the apartment house.

If you are using a clock arrangement to keep the heat off or low at night, try putting heat on an hour and a half before the occupants start using wholesale amounts of hot water. Start the heat at 5:00 a.m. This will warm up the radiators, develop steam pressure, and result in a lighter heating load later.

Hot radiators need less steam than cold radiators. If the radiators are fully heated at 6:30 a.m., the boiler may be able to maintain steam pressure from then on, even while the hot water load is great.

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Exclusively Equipped with the Mercoid Magnetic Mercury Switch
The Mercoid Sensatherm (low voltage thermostat) operates directly from the True Room Temperature without the use of internal heaters. There are no cycle adjustments—no special settings—simply install it—set it and forget it. One standard type Sensatherm will operate all basic primary controls. • The Magnetic mercury switch can give a million operations without deterioration. • The cover has a lifetime finish.
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You are considering using again the old water-heating boiler. Don't do that. But, since the tank must be usable, consider simply substituting a tank-type indirect water heater for the tankless heater you added to the boiler. A circulator might be needed in the circuit between the tank-type heater and the hot water tank. You are lucky the job has a 1,500-gallon hot water tank that's not used now, for simply putting this tank to use is a certain and inexpensive way out of your trouble.

Q. An office building uses 70 tons of coal yearly for heating, hot water being provided by an already-installed burner with a 275-gallon tank. How big an oil storage tank should be installed for a new burner that will heat the building?

R. M. A., Wausau, Wis.

A. About 70 gallons of oil will be used daily for heating during average January weather. Use the following basis for figuring the size of the oil tank, or alter it using your own ideas. During typical January weather, oil deliveries should be needed no more often than every ten days, and to avoid worry the tank should contain one week's supply of oil when the truck arrives. On this basis a 1,200-gallon tank is needed (accurately 1,190 gallon, obtained through multiplying 70 gallons per day times 17 days). Every ten days in January 700 gallons of oil would be delivered. The tank would contain 500 gallons of oil, a seven-day supply, when the truck arrived.

If the job is far from the fueloil storage plant or the owner will benefit by buying a truckload of oil at a time, consider installing a tank at least 500 gallons larger than the largest fueloil truck that will deliver the oil.

Q. If low stack temperatures causes more soot in furnace flues than high stack temperature, how to get higher stack temperature in a furnace fired by a pot burner? Firing the furnace exactly as the furnace instructions outline, I get too much soot in flues, so I must be getting a low stack temperature.

A. R. S., Gary, Ind.

A. You are jumping to an illogical conclusion, for low stack temperature is not the only cause of excessive soot in the flues. You have obtained meager information about the unsatisfactory operation of the furnace—you have not even obtained a stack temperature reading—therefore you are not in a position to disregard the manufacturer's instructions or try to improve on them.

Q. I told the furnace manufacturer I buy from that different pressure burners give different amounts of pulsation on troublesome low-capacity jobs. I'm sick of pulsation. He asks me, so I ask you, how to select the pressure burner that gives least pulsation, less than any other burner.

E. W. N., Lansing, Mich.

A. One procedure is to consider carefully what reputable burner manufacturers have to tell you about the pulsation-free performance of their burners, then try out the most promising burners in actual homes where pulsation has been a great problem. Field tests made painstakingly with the

Sell H.C. Little up-flow and down-flow oil furnaces for REAL profit!

these advantages make sales!

New eye appeal—

Compact design—

Quiet operation—very important in first-floor units.

Easy to service—built with the service-man in mind.

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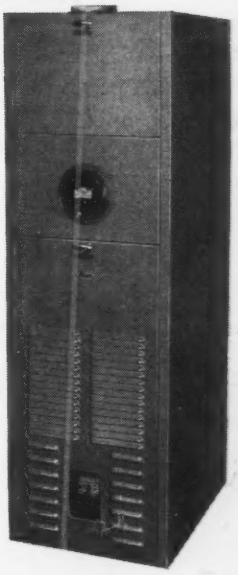

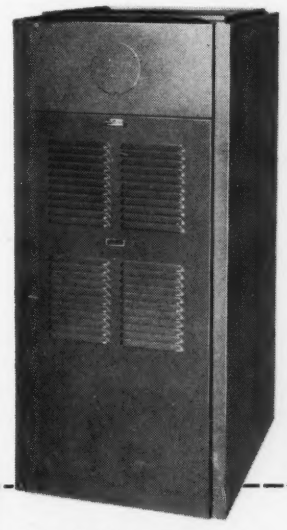

(ABOVE) TYPE DF-AC DOWN-FLOW OIL FIRED FORCED AIR FURNACE—24"x30¾"x74". Easy access to blower and controls. Return air intake at the top can be straight down or come in at either side or back. Bottom discharge opening 18"x18". Highly efficient. Extremely quiet. 92,000 BTU/hr. output.

(LEFT) TYPE U-AC UP-FLOW OIL FIRED WINTER AIR CONDITIONING FURNACE—27½"x30"x60". Optional front or top smoke pipe outlet. Pull-out blower mounting. Quick accessibility to burner and controls upon removal of front panel. 82,000 BTU/hr. output.

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Send profit-making facts on your U-AC and DF-AC furnaces to:

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burners firing the manufacturer's latest models of low-capacity furnaces should reveal much.

Q. Please give us formulae for estimating oil consumption of one and two family houses, preferably based on Btu loss per hour.

We would like one method for steam and hot-water installations, for heat and domestic hot water for eight months of the heating season plus domestic hot water for four summer months.

Also for warm-air furnaces, heat only.

C. V. S., Staten Island, N. Y.

A. Figure the eight-month heating-season oil consumption for the three types of heating systems you name as follows: First, figure the Btu heat loss of the house as painstakingly and accurately as you can. Second, add 15% to it as an allowance for the heat lost from the furnace or boiler and the ducts or piping of the heating sysem. Third, divide by 100,000 Btu to obtain what we will call here the "theoretical gph firing rate." One gph utilized at 70% efficiency provides about 100,000 usable Btu's per hour. Fourth, multiply the theoretical firing rate by 1,500 to find out how many gallons of oil will be needed yearly to heat the house.

Used by one engineer for fairly efficient heating plants, this method is reported to forecast fuel consumption usually with an accuracy of plus or minus 10%. Inefficient heating plants may use 20% more oil than this method indicates, and extremely efficient plants may use 20% less oil. The habits of the occupants are a factor also, for they can alter fuel consumption considerably. The results are in terms of a normal degree-day heating season; correct for an unusually mild or severe winter.

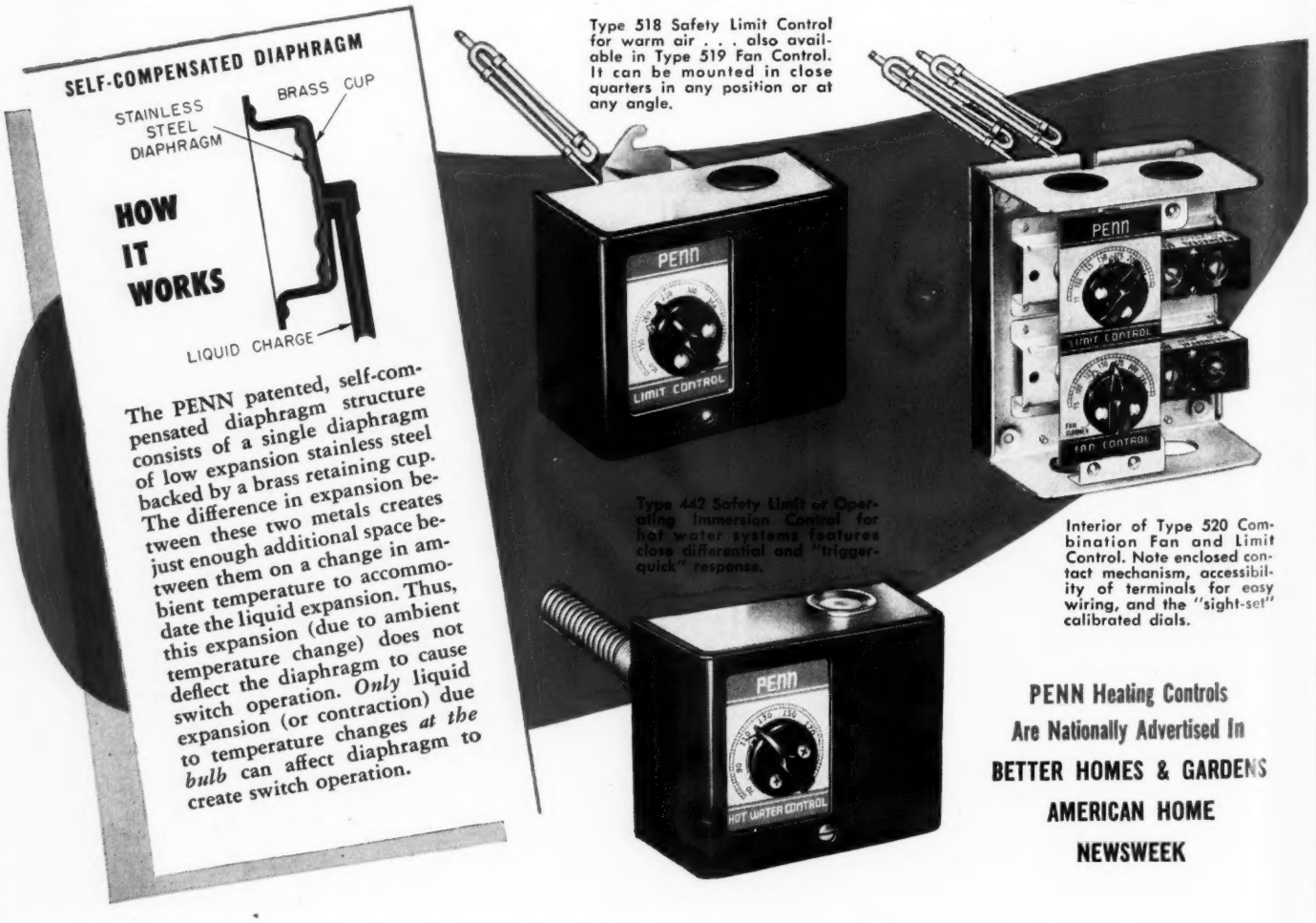
The same engineer figures that the burner of an ordinary heating plant providing summer hot water runs a total of two hours a day in summer to heat water. Find the daily consumption of oil in summer for water heating, by multiplying the actual gph firing rate of the oilburner by two. Then figure for four months by multiplying by 120. The most efficient heating plants in one-family houses which have been tested by this heating engineer use half that amount of oil per day in summer; their burners run a total of one hour per day.

The "theoretical gph firing rate" figured above may be lower than the firing rate actually needed to heat certain buildings, particularly buildings having steam heating sysems, for in figuring this firing rate no allowance was made for pick-up.

Q. Mr. Jean L. Dupuis: Studied with much interest your article on Enterprise burner job, p. 110 May issue of FO&OH. The circulating pump handles oil at 160° F. Is this a special pump?

O. S. J., Camden, N. J.

A. No. The circulating pump for such a job need be simply a pump of proper gph capacity, suitable for No. 6 fueloil. You can obtain information on such fueloil pump sets from: De Laval Steam Turbine Co., Trenton 2, N. J.; Kraissl Co., Inc., 295 Williams Ave., Hackensack, N. J.; Preferred Utilities Mfg. Corp., 1860 Broadway,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HOW IT WORKS
The PENN patented, self-compensated diaphragm structure consists of a single diaphragm of low expansion stainless steel backed by a brass retaining cup. The difference in expansion between these two metals creates just enough additional space between them on a change in ambient temperature to accommodate the liquid expansion. Thus, this expansion (due to ambient temperature change) does not deflect the diaphragm to cause switch operation. Only liquid expansion (or contraction) due to temperature changes at the bulb can affect diaphragm to create switch operation.
Type 518 Safety Limit Control for warm air . . . also available in Type 519 Fan Control. It can be mounted in close quarters in any position or at any angle.
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New York 23, N. Y.; and Tuthill Pump Co., 939 E. 95 St., Chicago 19, Ill. The names of these manufacturers are given in alphabetical order.

* * *

Q. I've always believed in making the most of every advantageous feature on an installation. Staring out servicing rotary cup burners after many years working on domestic burners, I go out on jobs and find the 15-second oil-valve delay not used. Panels that can start burner motors, then open oil valves in cup lines 15 seconds later, have been altered on the jobs so that motors start and oil valves open simultaneously. Cups don't come up to speed before receiving fueloil.

I am tempted to make these burners operate as their manufacturers intend them to, that is put their oil-delay feature to use, but am afraid to do this before getting advice.

J. Y. I., Mt. Vernon, N. Y.

A. We surmise that the burners were installed years ago and lack the low-fire start feature. With the oil valves opening 15 seconds after the motors start, start-ups may be more violent than they are now. The common practice of many dealers and servicemen is to eliminate the oil-delay feature of certain big burners to obtain smoother lighting, especially on cold starts.

Q. How many gph firing rate for an oil burner equipped with a tankless heater jibe with providing 5 gallons-per-minute of hot water, heated from 50° F. to 150° F.?

A professional man is building an insulated home that can be heated by firing the forced hot-water plant less than 1.50 gph. Reading up on water heating troubles makes him wary. He demands a minimum of 5 gpm of hot water on tap at all times. Should I figure this (1) with circulator running putting full heat load on boiler as well as 5 gpm hot water flow load, or (2) with circulator idle, boiler heating water only?

W. T. J., Sioux City, Ia.

A. The FO&OH thumb rule is: Firing 1.0 gph devoted entirely to heating water gives 2 gpm of hot water, 100° F. rise basis.

Hot water at 150° F. weighs 8.18 lbs. per gallon. The homeowner wants 300 gallons per hour. That's 2,454 lbs. of hot water per hour (8.18 × 300). Multiplying by 100, to account for the 100° F. rise, gives a water heating load of 245,400 Btu per hour.

Light fueloil of 139,000 Btu per gallon fired at 70% efficiency produces 97,300 available Btu per hour. Divide 245,400 by 97,300, and you find 2.52 gph firing rate provides 5.0 gpm of hot water, 100° F. rise basis. To install a 4.0 gph boiler in this house so that the both peak loads can be carried simultaneously (your #1 basis for sizing the boiler) is considered ridiculous by most heating experts.

Explain to the homeowner that if you install a boiler that will be fired 2.5 gph, he will be buying a boiler almost twice the size usually installed in a house like his. This he will be doing to insure sufficient hot water on tap, and it certainly will provide sufficient hot water on tap—if you make certain a 5 gpm tankless coil is in the boiler.

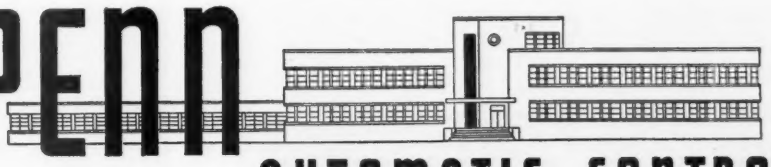
FOR TODAY'S *MODERN* HEATING SYSTEMS

CONTROLS with FAST RESPONSE

In thousands of installations . . . both warm air and hot water . . . heating men report that PENN Controls give *faster response, greater accuracy, more dependability* and are *easier to install.*

One of the reasons for this superiority on the job is PENN's patented, self-compensated diaphragm structure which eliminates the effect of ambient temperatures. Another reason is the liquid-filled power element which has greater sensitivity combined with dependable performance year after year. Then there is the compact, snap-acting contact structure totally enclosed to assure a dust-proof, tamper-proof, dependable switching mechanism.

And there are many other reasons which make PENN heating controls "tops" for any system with every kind of fuel. Try 'em on your next heating job . . . and you'll agree! Ask your burner manufacturer, wholesaler or write **Penn Controls, Inc., Goshen, Indiana.** Export Division: 13 E. 40th Street, New York 16, N. Y., U.S.A. In Canada: Penn Controls Limited, Toronto 13, Ontario.



PENN AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Q. We have been discussing why a truck does not pump off fast enough. We would appreciate your suggestions for checking the pump and associated parts.

F. U. C. I., Rockaway Park, N. Y.

A. The following common causes of the trouble are not in proper order of importance:

1. Insufficient pump pressure for any reason; perhaps pump is worn or defective or is too small, or pump shaft speed is too low because of wrong gear ratio in power take-off. Pump should be able to develop 45 lbs. pressure with hose nozzle open, if you desire pressure this high for fast unloading. Use a pressure gage on output side of pump to check pressure.

2. Hose too small, or defective partly-obstructed hose; if you can, try a hose from another truck.

3. Small pipe fittings or obstructed fittings in pump input line or output line.

4. Delivery hose too small or too long for its size.

5. Defective fueloil meter holds back flow of oil.

6. Strainer plugged.

7. Relief valve set too low resulting in less than 45 lbs. pressure on the unloading basis outlined in item #1.

8. Pump fights to get fueloil for any reason, perhaps because vents of compartments are plugged. Check this by using a vacuum gage at input side of pump.

You will help yourself greatly by equipping the pump with an input-side vacuum gage and an output-side pressure gage, both easily installed by drilling and tapping fittings with 1/8" ipt connections. If the pump-output pressure is sufficient, use additional pressure gages along its entire output circuit to try to find a point at which the pressure-drop is excessive. Do all pressure checking with truck unloading at maximum rate.

Q. We are one of your subscribers for a good many years and would appreciate it if you could give us some confidenital advice.

Last fall we installed in an apartment building a boiler-burner unit rated at about 2,800 sq. ft. standing hot-water radiation. The owner is complaining of excessive oil consumption which in our estimation is not justified and we are trying to prove to him our claim.

This boiler is in a six-family three-story apartment building. Building is open on all four sides, has no insulation, no storm windows or storm doors, and has more than average glass exposure. Windows are very loose throughout building. Boiler has a tankless water heater rated at 5½ gpm. The standing radiation installed in building is 1,100 sq. ft. steam. Average degree-day load for this vicinity is 5,300 yearly. Thermostat in building is set at 76°.

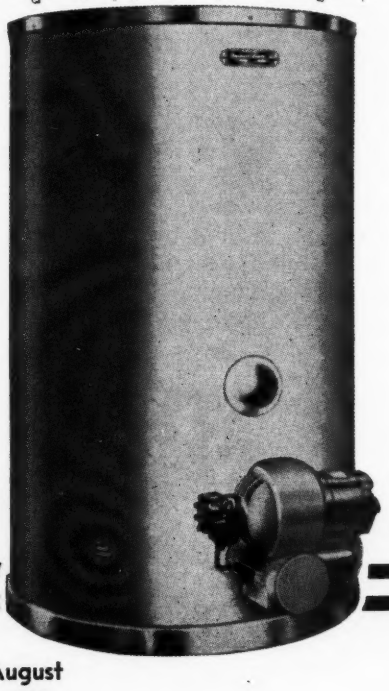
We would appreciate very much if you could give us an approximate rate of oil consumption to heat building as per conditions outlined above.

V. E. S., Bethlehem, Pa.

A. Impressed by your request for confidential advice, we altered your initials, following our policy for all inquiries, shifted your location a few miles, and changed your boiler rating and radiation load figures slightly.

You'll Like ..... THE QUICK PICK-UP IN .... Profits in the Small Home Market with ...

SHEPHARD PERCOLATING ACTION BOILERS



Yes, PROFITS are intensely interesting these days, particularly when they come from prestige building merchandise . . . through a market that is growing daily. Yes, SHEPHARD Domestic Boilers and Hot Water Heaters (incorporating the Percolating Action) have become a standard in profits, efficiency and economy. This well known action prevents lime, scale and sediment from collecting . . . keeps boiler continuously clean . . . thus preserving the life and efficiency of the heating unit. Sturdily constructed for long-lasting dependability. Completely arc welded from boiler plate and tubes. Thoroughly galvanized inside and out. Furnished with any desired color (blue is standard) with chromium trim.

Boilers have 2" wool insulation. WRITE FOR FURTHER DETAILS.

Shephard HEATER CO. INC.

951 SYCAMORE AVE., TERRE HAUTE, IND.

To arrive at a good estimate for the yearly oil consumption of this apartment house, using the data you provide, is absolutely impossible. In such a case, different heating engineers spending days studying the problem and helped by detailed on-the-job inspection of the heating equipment and building often arrive at widely different figures.

The best we can do to help you is give you the following figures, necessarily hinged to the indicated assumptions.

Net heat Loss

Assuming that the 1,100 sq. ft. of standing radiation matches the heat losses of the building precisely and is based on 200 Btu per hour per square foot of forced hot-water radiation, we arrive at 220,000 Btu per hour as the net total heat loss of the building. Adding 25% for piping and pick-up, the gross heating load on the boiler amounts to 264,000 Btu per hour. Considering this and the additional load of the tankless water heater, we assume that 3.0 gph is a suitable firing rate for the boiler.

Simply because extensive data indicate we can expect a burner to run 1,500 hours a year for heating, we multiply 3.0 gph by 1,500 and wind up with 4,500 gallons of oil used during the heating season. Exceptional burners run fewer than 1,000 hours a year for heating, however, and others run more than 2,000 hours.

For the three months when no heat is needed, this burner might run two hours total time per day to heat water, therefore we add 540 gallons for summer oil consumption (obtained by multiplying 30 by 6 by 3). Add 4,500 to 540 and get 5,040 gallons as the expected yearly oil consumption. Divide by 6, and you obtain the figure of 840 gallons per year per apartment, which is a reasonable figure. These figures can easily be increased up to 40% by two factors, needless overheating and the very loose windows you mention.

To serve your interests best, we must point out to you that your position is vulnerable, in fact indefensible, if you have not used combustion test instruments on this job. Most oilheating equipment manufacturers and other good authorities declare that every newly-started installation should receive the fuel-saving benefits of combustion tests. There can be no argument whatsoever regarding the point that combustion tests should be made when an owner complains about high fuel consumption of newly-installed oilburning equipment.

We suggest you switch tactics and prove these points to the owner:

1. Prove that no oil is being wasted because of excessive stack temperature. Use a stack thermometer.

2. Prove no oil is being wasted because the fire is inefficient because it receives too much air or too little air. Use a CO_2 analyzer and a smoke-checking instrument.

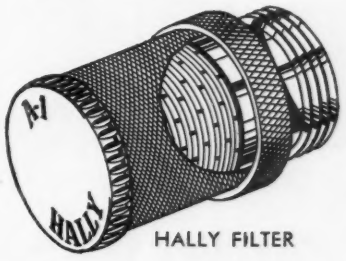
3. Prove no oil is being wasted because of poor control of the chimney draft. Use a draft gage to take over-fire draft readings.

4. Prove no oil is being wasted because of overheating of rooms; thus prove the heat control system you installed is doing its work well. It appears to us that you may be to blame if rooms are overheated because of poor

End NOZZLE CLOGGING In Small Capacity Nozzles...!

Install DELAVAN NOZZLES With HALLY FILTERS Attached

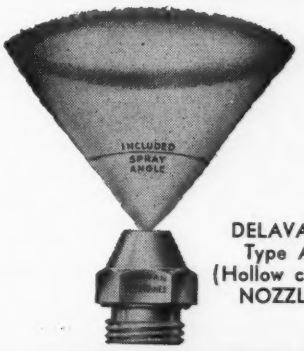
In burners of 1 G.P.H. capacity or less, nozzle clogging was once a serious service problem. Now, with HALLY FILTERS attached to new DELAVAN NOZZLES of the correct size and type, this problem has been solved for thousands of service departments.



HALLY FILTER

With openings only 1/4 to 1/3 as large as in ordinary wire screen strainers, the HALLY FILTER makes it impossible for foreign particles in oil ever to reach the distributor slot of the nozzle.

It Pays to Use DELAVAN NOZZLES



DELAVAN Type A (Hollow cone) NOZZLE

Add this positive filtering action to DELAVAN NOZZLES — every one tested and proved accurate on rate of flow, spray angle and spray quality—and you have an unbeatable combination.

Write for Catalog 148B

DELAVAN MANUFACTURING CO.

Grand Ave. & 4th St. • West Des Moines, Iowa

performance of the heat control equipment you provided for the boiler-burner unit.

5. Prove no oil is being wasted because of poor insulation on the boiler you installed.

After you have proved each of these points, you will be in a position to tell the owner that your equipment is not wasting his oil. Until then, you are not in a good position.

Q. We need complete information on new small-duct warm-air systems for homes. We are concerned primarily with using small-pipe duct work to modernize old heating systems.

Specifically, we want information on the feasibility of changing a gravity sysetm to a perimeter system when a forced-air furnace is installed. We have an idea that by changing the old return-air outlets to warm-air outlets and vice versa, plus the use of small pipe, a better system would result—with no patching involved. Additional diffusion type outlets could be installed as necessary, of course.

We want to know also how far one can go in mixing both large and small pipe runs in the same system.

Thus we are most anxious to obtain all information possible on small-pipe systems—from theory of operation to practical applications. Can you help us with names of publications and sources of same?

K. G. R., North Tonawanda, N. Y.

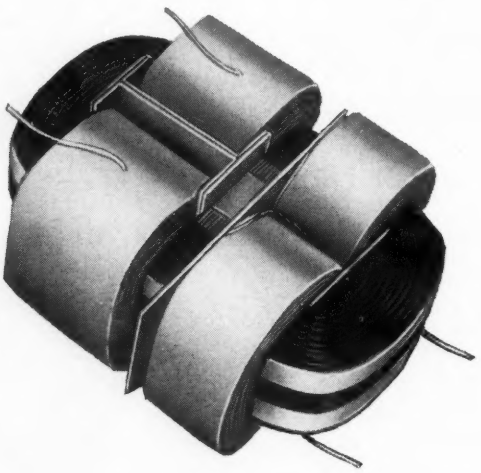
A. You can mix large and small pipe runs to any desired degree in the same system, if you engineer for furnace-bonnet pressure suitably high for the small-duct runs and block the large-pipe runs sufficiently to wind up with only the desired cfm through these runs.

As you are interested in everything from theory of operation to practical applications, you should start out by equipping yourself with a few standard textbooks on furnace-type heating, particularly forced-air heating, instruments for measuring air-flow at supply and return registers, air velocities in ducts, and duct-air temperatures and pressures, and manuals and literature issued by manufacturers in the warm-air field, particularly the literature recently issued by many manufacturers on small-pipe systems.

Our technical editor recommends highly the book, "Modern Air-Conditioning, Heating and Ventilating" by Willis H. Carrier, Realto E. Cherne, and Walter A. Grant. Priced at $10, this is obtainable from the Pitman Publishing Corp., 2 W. 45 St., New York, N. Y. You should study particularly Chapter 12, Design of Air-Duct Systems; Chapter 17, Air Distribution; and Chapter 21, Residential Heating and Air-Conditioning Systems.

Don't fail to get information about available manuals, particularly new manuals on small-pipe perimeter warm-air systems, from the National Warm Air Heating & Air Conditioning Association, 145 Public Square, Cleveland 14, Ohio.

Write to equipment manufacturers for their manuals and literature—particularly the furnace, duct, and register manufacturers who now are stressing their small-pipe systems and specialties.



MAGNEX IGNITION TRANSFORMERS

Have The Exclusive Tape Wound High Grade Silicon Steel Core

The tape wound steel core construction in Magnex transformers was developed for the armed forces and electronic laboratories during the war, to obtain high efficiency, lower losses, cooler operation and to reduce the size and weight of transformers for aircraft, portable equipment, radar, etc. Magnex engineers were the *first* to apply modern techniques developed for radar and pulse transformers, adapting this method for *oil burner use.* Although the initial cost of tooling up for the manufacture of a one piece, continuous tape wound core is great; the end product results in a more expensive type, low heat rise transformer at *considerable savings.*

MANUFACTURERS SELL MORE BURNERS!

Magnex ignition transformers use the *best quality materials and workmanship,* assure longer, trouble-free oil burner performance. Burner manufacturers get greater customer satisfaction from dealer to owner—which means repeat business. Formvar insulated wire used throughout allows full short circuit protection. Positive shielding eliminates radio and television interference. Core and coil balanced construction is unique.

"Quality Products because our Reputation depends on Outstanding Performance"

For use with external or internal junction box, scientifically designed and constructed Magnex transformers are housed in one piece, baked enamel steel cases for easy installation. Made to standard and custom specifications, terminal locations, designs, and base mountings are available for individual burner manufacturer's needs.

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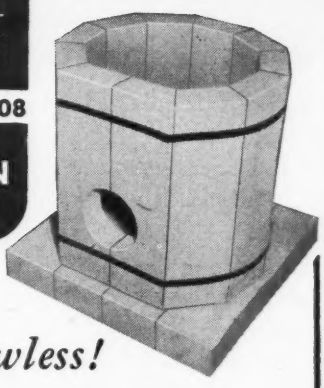
COMBUSTION CHAMBERS



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The universal design of GEM Chambers enables fast and easy installations in any boiler or furnace. The scientific "float packaging" used assures maximum protection from breakage. Enjoy GEM's many advantages on your jobs—Write Today!

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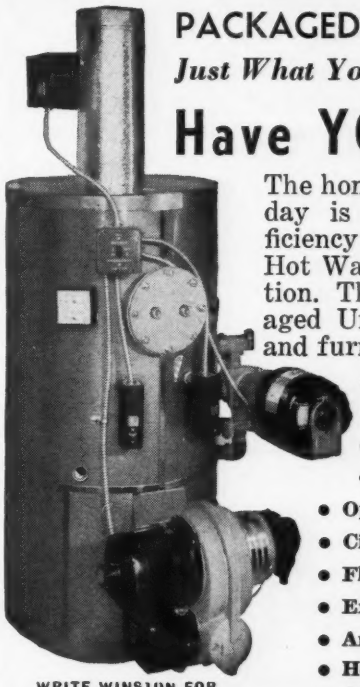

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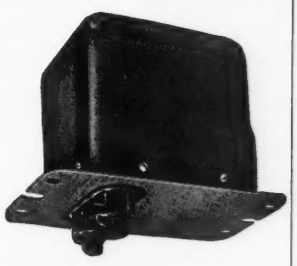
UNFAILING IGNITION FOR OIL BURNERS



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Q. If the fuel unit is two-stage type, does a pressure burner connected to a buried, outside tank need a return line?

N. T. S., Knoxville, Tenn.

A. It certainly needs a return line! A two-stage fuel unit has no advantage over a single-stage unit on a job without a return line. Provide every outside-tank job with a return line whether the burner has a single-stage or a two-stage fuel unit.

Q. What's a suitable design temperature for the bonnet of a small forced-air job in a modern five-room insulated house?

A. D. U., Utica, N. Y.

A. Many heating engineers design for a maximum bonnet temperature of 175° F., a few for 200° F. Under certain conditions, up to 225° F. bonnet temperature may be the aim.

Q. Occasionally in servicing burners I come across an inside-tank 275-gallon job that has a return line for a pressure burner. Should I recommend eliminating the unnecessary return line? Isn't it a mistake to install a return line on such inside-tank jobs?

M. K., Brooklyn, N. Y.

A. The answer to both your questions is No. A return line has advantages for an inside-tank job, including reduced tendency for the burner's pump to air-bind, and increased chances of the owner's starting the burner by himself, without a serviceman's coming to air-rid it, after running out of oil. A return line must be used, even on an inside-tank job, to gain the benefits of the two-stage fuel units provided as standard on certain burners.

❖

Leasing Trucks

(*Begins on page* 69)

of around $200 a month.

The weekly rate allows 200 miles of driving and there is a charge of roughly 25¢ a mile beyond that. Then there are four more trucks used only in the peak season of 20 weeks each year and they cost substantially more. All figures mentioned are very general but they give you the broad outline.

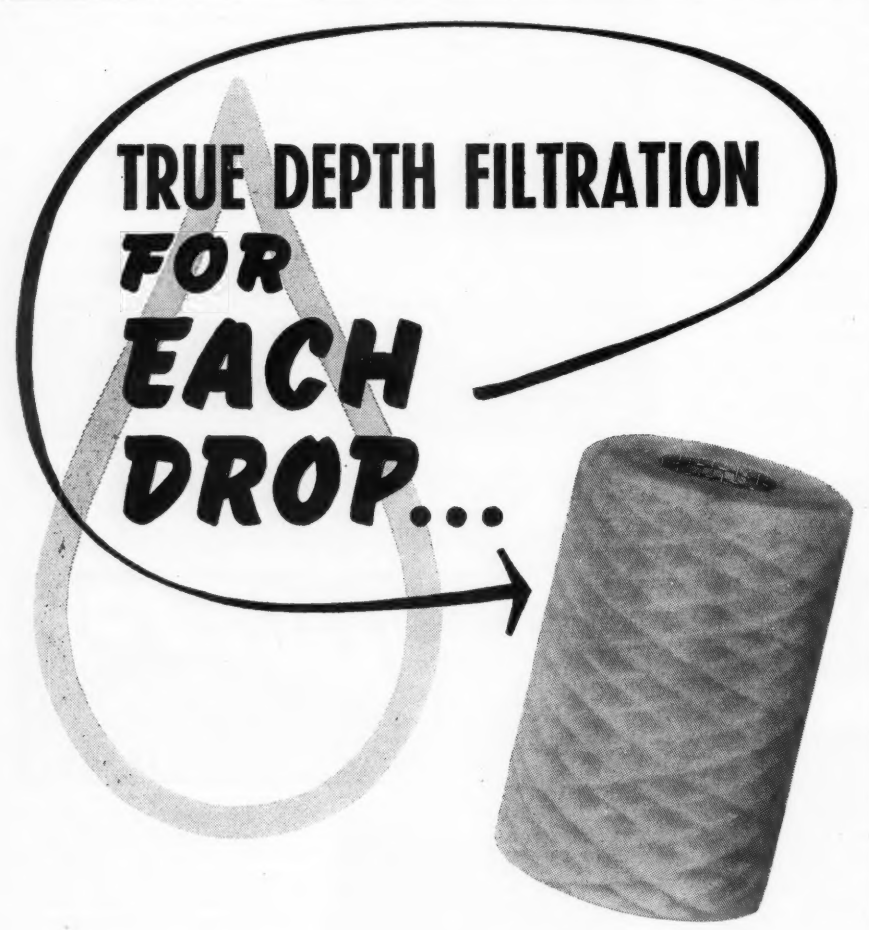
So all told there are 12 Brooklyn-Cornell trucks on the street . . . big handsome things varnished every year and painted every three by the leasing company.

The cost is not out of line with private truck operation. Last year the total amount paid the leasing company represented .63¢ per gallon delivered, which was not bad for one of the world's most congested cities.

Naturally this did not include drivers. Bloomberg has his own crew. He lays off about half of them in the summer, but they usually come back because that way they preserve their seniority in the union. The rate is $2.14½ an hour.

In a way Bloomberg feels that he actually owns the trucks because they are made up to his ideas and because his contract allows him to buy them from the leasing company at any time, on a pre-arranged depreciation schedule.

He may eventually buy them, but for now he operates harmoniously on a give-and-take basis with the owners.



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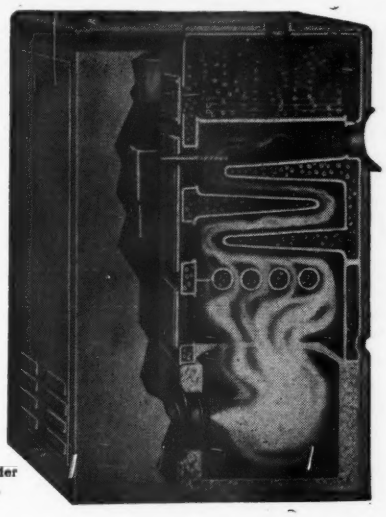

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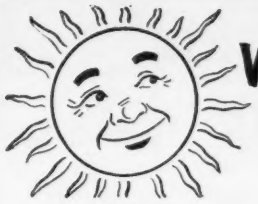

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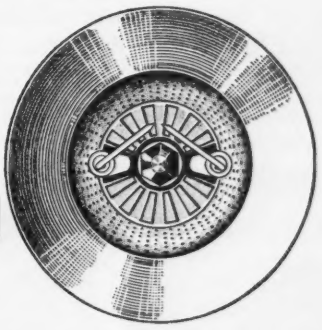

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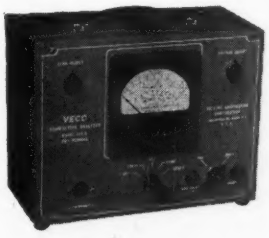
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.



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This emblem means contentment in more than a million homes.

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White-Rodgers Controls

(*Begins on page 71*)

Type 611 continuous-ignition control panel.

White-Rodgers' engineers point out that both the constant-ignition panel and the intermittent-ignition panel have had five full seasons of use on actual installations to prove they have 100% practical, outstanding features.

These engineers are particularly proud of the bimetal helix and combustion switch arrangement used in these White-Rodgers control panels, which they declare is the result of oilburner servicemen asking for sturdy protection for the temperature sensing element, and asking also for design that prevents a jar or jolt from knocking the combustion switch out of operation. To comply with these requests from servicemen, White-Rodgers provided a heavy-metal guard around the bimetal helix that moves the combustion switch —also produced a combustion switch action of unique design.

The bimetal helix, usually located in a smokepipe, is described by White-Rodgers as exceptional for sensitivity. That is, the helix and the combustion switch it operates will respond properly to a 50° F. rise in stack temperature that occurs within 90 seconds of the time the burner motor starts. This is said to be of great value to burner dealers and servicemen because it prevents nuisance service calls from owners of furnaces and boilers which, highly efficient, have low stack temperature readings.

While on the one hand this control panel is said therefore to perform excellently on installations having exceptionally low stack temperatures, on the other hand it is also described by White-Rodgers men as suitable for smokepipe temperatures up to 1,000° F.

The clutch of the combustion switch is outstanding; it is large and sturdy, which pleases servicemen. There's a big metal knob for setting the combustion switch in its cold-stack position—if the burner won't start because the combustion switch is in its hot-stack position (when the time arrives to start up a brand-new burner, or after a stack control panel has been removed from the stack for inspection), you simply turn this big metal knob counter-clockwise about an eighth of a turn, then release it slowly. No tools needed for this, not even a screwdriver! By the way, no tool is needed, not even a screwdriver, to remove the cover from the control panel; you just turn another big metal knob, on the front of the cover, with your fingers, then smoothly slide off the cover.

This also pleases servicemen: To remove the big knob and clutch arrangement of the combustion switch, you simply loosen a set screw using an Allen hex-key wrench, then easily slide the assembly from the shaft of the bimetal helix. The manufacturer rates thanks from servicemen for that feature!

The next logical step is to examine closely the clutch of the combustion switch to gain full appreciation of an unusual and valuable feature; there's an unloading or strain-release arrangement, intended to extend the life of the smokepipe bimetal helix, which releases about two-thirds of the load or

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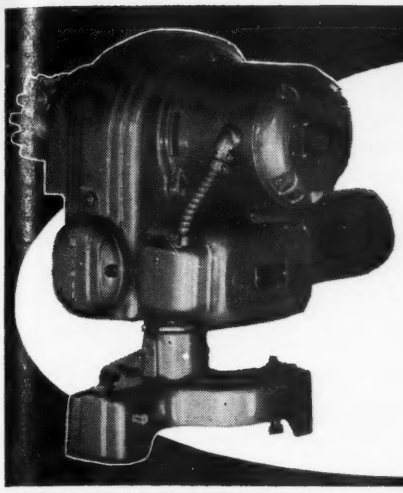

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* *Conclusions resulting from independent survey of oil burner dealers.*

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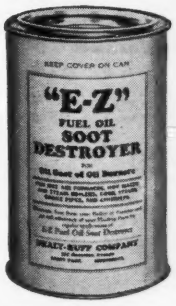

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strain on the helix after the switch blades close the cold-stack contacts or the hot-stack contacts. Avoiding unnecessary distortion of the helix, this is an important feature that can be studied only by actually handling the clutch.

After you've used the Allen hex-head wrench to remove the knob and clutch assembly of the combustion switch, the next logical step is to remove four screws and take the entire electrical assembly out of the stack control. You can trace the wiring of all the electrical component parts by studying the back of this entire electrical assembly. If you are good at circuitry and can use a soldering iron, you can remove and replace different electrical assembly such as relays, the safety switch assembly, the low-voltage transformer, etc.

Enthusiasts for White-Rodgers panels stress these additional technical features:

1. Compensated in every way for different ambient temperatures, and capable of working properly under unusually high ambient temperatures. Here the proof of this, given by a White-Rodgers field engineer. In September, 1950, after seven other stack control panels had burned out on this "impossible" job, a White-Rodgers Type 610 stack control panel was installed on a purely experimental basis. When last checked in September, 1952, this control still was operating, giving good service. The job, in Richmond, Va., involves a rubber vulcanizing unit, and ambient temperature of 225° F. for the stack control.

2. The combustion clutch is easily put in step (in its cold-stack position) and once put in step will remain there even if the control is handled roughly.

3. Easily adjusted ignition timing for the intermittent-ignition panel; electrical timing, adjustable by the serviceman, gives from 45 to 90 seconds additional ignition from the time the hot-stack contacts of the ignition switch close.

4. The various sub-assemblies of the control panel can easily be removed by any good serviceman; to remove an assembly, unsolder its connecting wires and remove two screws.

5. The contacts and other parts of the safety switch assembly can be seen easily; a serviceman does not have to adjust the timing of the safety switch, but he can if he wants to by using a screw provided for this.

6. Difficult to get a shock from the control, for all exposed contacts are low voltage; to get a shock, you have to make certain to touch the line-voltage terminals, at the lower right-hand corner of the panel!

7. Heavy duty; the motor-current contacts are rated at one horsepower, although the control is intended for a motor no larger than one-half horsepower. The design was aimed to make contact burning, pitting, and freezing impossible.

8. Bimetal smokepipe helix easily removed; take out two stainless-steel screws from two stainless steel parts; no rusting, crystallizing, or jamming of screws when you have to replace a helix in a hurry.

9. Impossible for relays to hold in when they shouldn't because of residual magnetism; relay coils have built-in air gaps amply large to prevent holding

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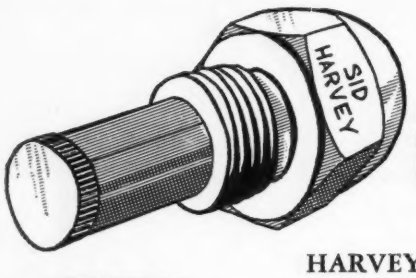

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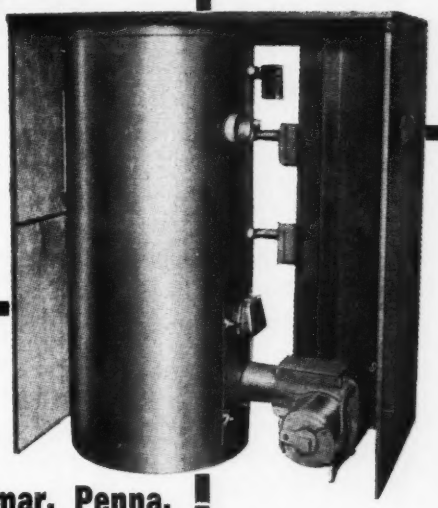

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12. Safety re-set lever on the front of the control panel permits a burner owner to re-start himself a burner that's "off on safety"—easily and of course without removing the cover. But a burner owner can't hold or block the safety switch in its closed position by using the safety re-set lever.

13. Troublefree operation and minimum servicing; the result of use of oversize, solid silver, self-wiping load contacts . . . extra-sensitive smokepipe helix and combustion switch that respond quickly to unusually low stack temperatures . . . self-cleaning design of smokepipe bimetal helix . . . electrically-timed ignition period and scavenger period—after a momentary power failure and after every normal "on" period, the burner can re-start only after an "enforced off period" or scavenger period of one minute.

14. Complete protection against low line-voltage; burner cannot start if voltage is too low for safe starting; burner will stop if while it is running the voltage drops below a safe minimum.

Those are the features which White-Rodgers enthusiasts are likely to list for these stack control panels, which the manufacturer describes as "control panels designed by oilburner servicemen." Judge these features for yourself! But bear this in mind: To reach dependable conclusions regarding the different makes of control panels covered in this series of articles, you should handle and take apart the controls yourself, and in addition should try them out on your installations.

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Massachusetts revises its oilburner Regulations

REVISION of State of Massachusetts Form FPR-3, covering the rules and regulations governing the construction, installation and operation of oilburning equipment and the keeping, storage and use of fueloil or other inflammable liquid products used in connection therewith, was approved on April 28. Fred Beckwith, executive secretary, Oil-Heat Institute of New England, Boston 15, explains:

"This revision is a culmination of more than two years of conferences with the Board of Fire Prevention Regulations, during which time we had the active cooperation of the Fire Chiefs' Club of Massachusetts in our recommendations for changes in the previous Regulations."

Some of the changes contained in the revised rules are: Allowable amount of heavy fueloil that may be used in a building or structure without license raised from 5,000 to 10,000 gals.; manufacturers of oil tanks required to subject their tanks to 5 lbs. pressure and to so certify on the metal plate or tag attached to the tank; in the termination of vent and fill pipes, there has been added a sentence stating that a stationary window shall not be considered an opening for the purpose of this rule; elimination of hydrostatic tests for tanks and piping; all electric wiring and equipment in connection with oilburners in accordance with the National Electrical Code, adopted by the State of Massachusetts as its code.

Robert Ulm is the new fire marshal for the state.

❖

Esso considers Site for Virginia Refinery

ESSO STANDARD Oil Company has proposed purchasing approximately 846 acres on the west side of the Elizabeth River between Craney Island and West Norfolk in Norfolk County, Virginia, as a site for an oil refinery should the company decide to build a new plant on the East Coast.

This is part of a long-range expansion program.

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. . . These values and the Sundstrand reputation for the finest in oil heating add up to complete customer satisfaction. Foot or bracket mounted, all Sundstrand oil burners are listed as standard by Underwriters' Laboratories . . . and meet all state and local requirements.

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SUNDSTRAND ENGINEERING CO., Rockford, Illinois

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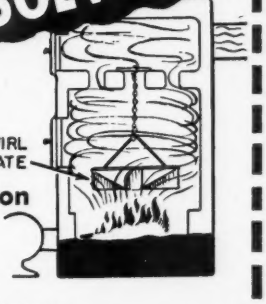


With the Only Swirling Action

BAFFLE PLATE

GET THE FACTS — CONTACT YOUR JOBBER OR WRITE TO

FIRE-SWIRL ZEH COMPANY INC., PASSAIC, N.J.

HEAT-LOCK

AUTOMATIC DAMPER

Controls chimney draft without robbing cellar of its air.

Saves fuel by holding heat in combustion chamber when burner is not running.

Available to one dealer only in each area.

Use it as an extra sales feature to sell new installations.

NATIONAL FUEL CONSERVATION CO., INC.
P. O. BOX 750, WHITE PLAINS, NEW YORK

GORTON Vapor Valves

ARE THE QUICKEST VENTING VALVES MADE

RADIATORS HEAT WITH 4 TO 8 OUNCES OF VAPOR

No more cold rooms
No more waste of fuel
It's GORTON *Logical*

Write to-day

FOR FREE NEW DISPLAY CARD ON GORTON VALVES

Size 14" x 20" in attractive colors

Gladly sent upon request

GORTON HEATING CORP.
Since 1887—Manufacturers of Heating Equipment
CRANFORD, NEW JERSEY

Why THOUSANDS *Prefer* VIKING TRUCK MOUNTING PUMPS

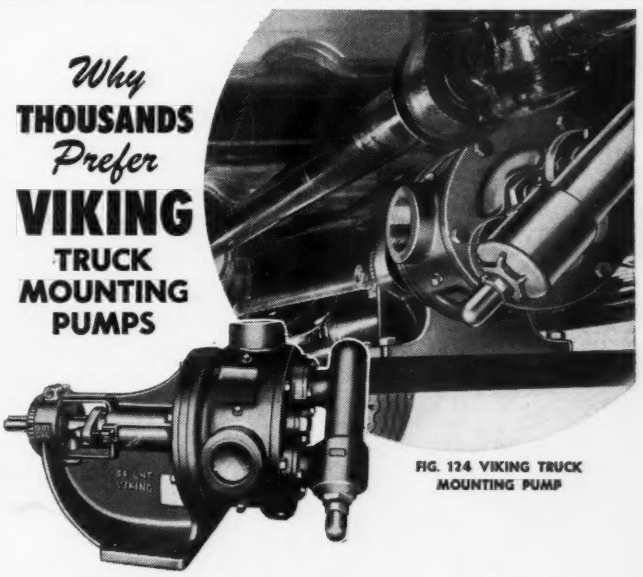


FIG. 124 VIKING TRUCK MOUNTING PUMP

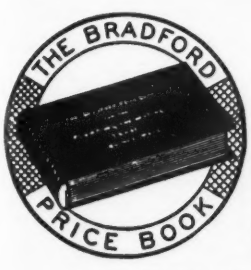
1. Self priming with the VIKING "gear within a gear" principle.
2. Rugged construction. Built for hard, every-day service.
3. Direct connected to standard power take-off.
4. Compact relief valve on pump head.
5. Extra long stuffing box.
6. Casing can be turned to any 45° angle.
7. Available in 35, 50, 90, 150, 200 and 300 gpm capacities.

VIKING AN HONORED NAME IN PUMPING

Send for bulletin 1507EE today for complete information.

See Our Catalog in SWEETS

VIKING PUMP COMPANY
CEDAR FALLS, IOWA



A MOST USEFUL TOOL IN MAINTAINING A SUCCESSFUL BUSINESS

SAMPLE SHEETS UPON REQUEST

THE BRADFORD PRICE BOOK
QUINCY 69, MASS.
Serving the Plumbing & Heating Trades, over a 1/3 of a century

SERVICEMEN

NEW HELIX TOOL

Tool of the Month

Only $1.25

Simply insert Helix-tool onto "U" nut and tube for removal of tab screw.

You can now remove and install helixes for MH-RA-117 controls in a jiffy.

"Helix-tool" is a specially designed tool for simple removal and replacement of the helix in the MH-RA-117 controls.

A problem which has always been troublesome in servicing Helixes, is the matter of corroded screws, bending the tab and clutch rod. This especially designed "Helix-tool" solves this problem, because it holds the hard-to-get-at "U" Nut for removal and replacement.

Place handle of Helix-tool behind clutch rod, as shown, for screw removal.

Made of heat treated steel, rust proofed and fully guaranteed.

Get it from your jobber, or write direct.

To install, place "U" nut between tool fingers, insert into tube. "Simple, isn't it."

HYDROVALVE CO.
1319 Utica Ave.
Brooklyn 3, N. Y.

Another Levittown

(*Begins on page 63*)

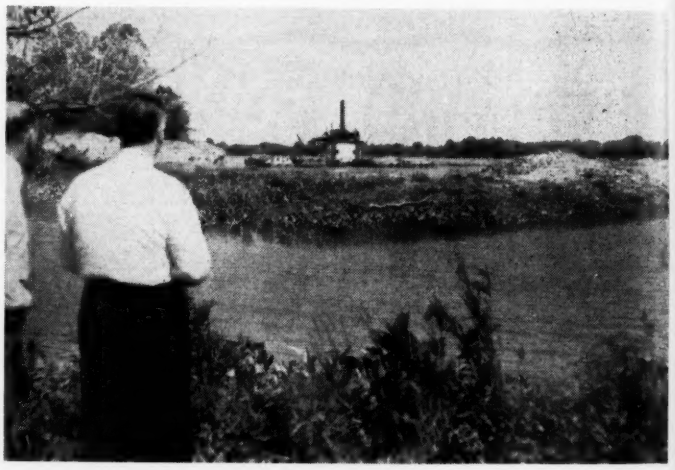
supposed to be a day's work for one of the dual trucks, and the weather calculation determines which day this whole zone shall be supplied. Under this system the average drop for 275 gallon tanks is 185 gallons. They have run as high as 234 for a zone, but that was due to a tie-up.

. . . . . .

Deepening the channel *in a back bay off the Delaware River, site of Meenan's new barge terminal which will be in operation this fall. The company will load its barges at the new Fisher Island ocean terminal just 17 miles down the river. This is being built by Norman Keith and associates who will operate it as Delaware Terminals.*

Four of the big dual trucks take care of the present 4,200 customers and then there are 11 burner service trucks. After the first year more service is on an $18 contract which includes all parts but not a vacuum job.

Levittown is a mecca, it's a haven for young married folks with incomes of $5,000 or below with everything budgeted to a knat's heel. Oilheating is doing for them a better job than any other fuel could do in the area, and from all accounts the folks love it.



Automatic Humidifiers

A COMPLETE LINE WITH A TYPE AND SIZE FOR EVERY WARM AIR FURNACE

THERMO-DRIP
Most efficient, dependable way to put moisture in air in proportional, measured amounts.

NEW VAPORITE 577
Factory assembled. Adjustable to sloping bonnets.

VAPORITE 555
One size, one kit completely assembled for lowest cost installation.

VAPORITE SERIES 500
Stainless steel pans give quick heat transfer. A size for every warm air furnace.

MODEL CF-500
For counterflow furnaces.

Write today for free literature on the humidifier that will best meet your specifications.
FO-83

AUTOMATIC HUMIDIFER CO., CEDAR FALLS, IOWA

NOW is the TIME to "CLEAN-UP" with a GRAND RAPIDS FURNACE CLEANER

Act Now! Get in on this year's cleaning profits. *Order a Grand Rapids Furnace Cleaner.*

IT'S FAST—Handles twice as many jobs as the ordinary furnace cleaner.

IT'S THOROUGH—High velocity suction completely removes ashes, soot, scale and dirt from every type of heating plant.

IT'S COMPLETE—A packaged unit with practical cleaning attachments designed for fast, easy cleaning.

IT'S PROFITABLE—The trouble-free operation and speedy service of the Grand Rapids Furnace Cleaner puts extra profits in your pockets.

Send today for complete information about the Grand Rapids Furnace Cleaner.

DOYLE VACUUM CLEANER CO.

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